US006411993B1

(12) **United States Patent**
Reynolds et al.

(10) **Patent No.: US 6,411,993 B1**
(45) **Date of Patent: *Jun. 25, 2002**

(54) **INTERACTIVE WEB BOOK SYSTEM WITH ATTRIBUTION AND DERIVATION FEATURES**

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(73) Assignee: **Family Systems, Ltd.** (GB)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **09/329,142**

(22) Filed: **Jun. 9, 1999**

Related U.S. Application Data

(63) Continuation of application No. 08/735,727, filed on Oct. 23, 1996, now Pat. No. 6,052,717.

(51) **Int. Cl.**[7] **G06F 13/14**; G06F 15/16

(52) **U.S. Cl.** **709/218**; 709/203; 709/219; 707/10

(58) **Field of Search** 709/203, 219, 709/218; 707/10

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(List continued on next page.)

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(57) **ABSTRACT**

An interactive Web book ("ibook") system is provided that allows material to be contributed to the World Wide Web. An ibook is a self-extending, self-sustaining information-redistributing Web robot, which is resident on a data network such as the Internet or an intranet. Users may enroll with an ibook as viewers or contributors. Viewers may view ibook material, such as text or multimedia content. Contributors may contribute original material to the ibook or may create derivations of existing ibook material. Attribution information that identifies the source of material in a derivation is automatically generated. Information concerning the derivation of each work and its characteristics can be used to help the user navigate through ibook material. The ibook system keeps track of how often users access each work within an ibook. Contributors may be automatically rewarded (e.g., by a monetary distribution) based on the extent to which their contributed material is viewed by the users.

125 Claims, 14 Drawing Sheets

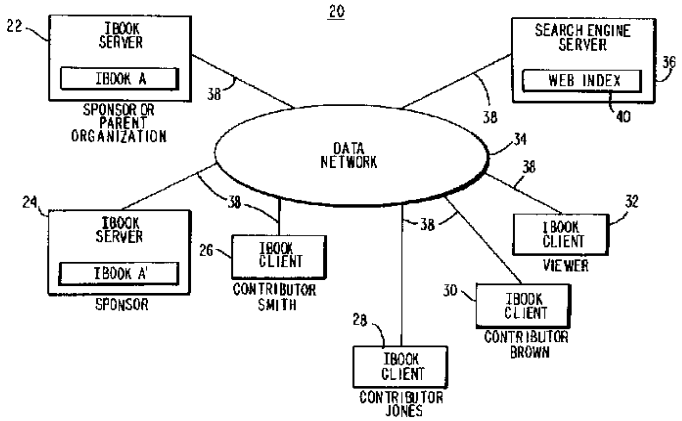

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FIG. 1

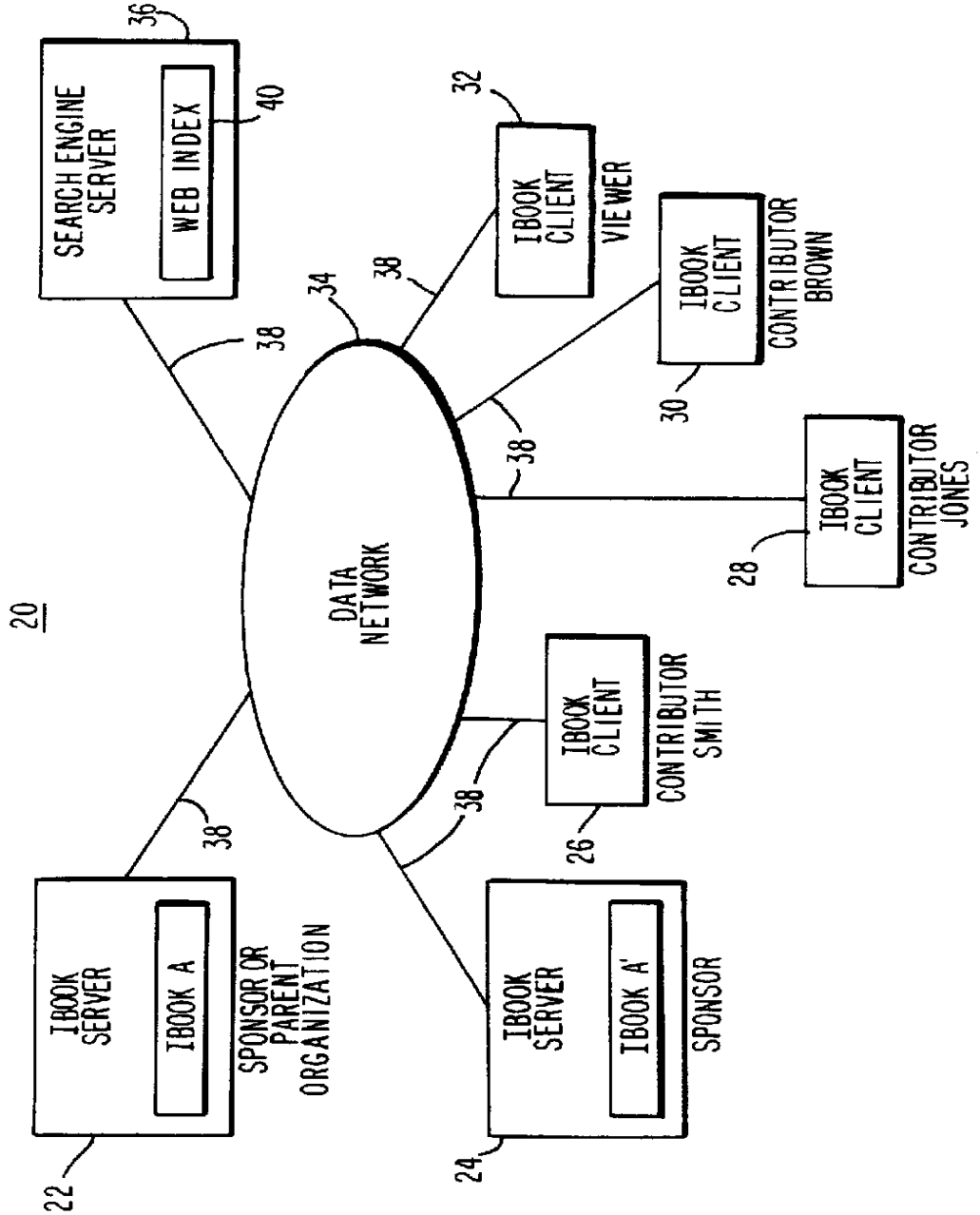
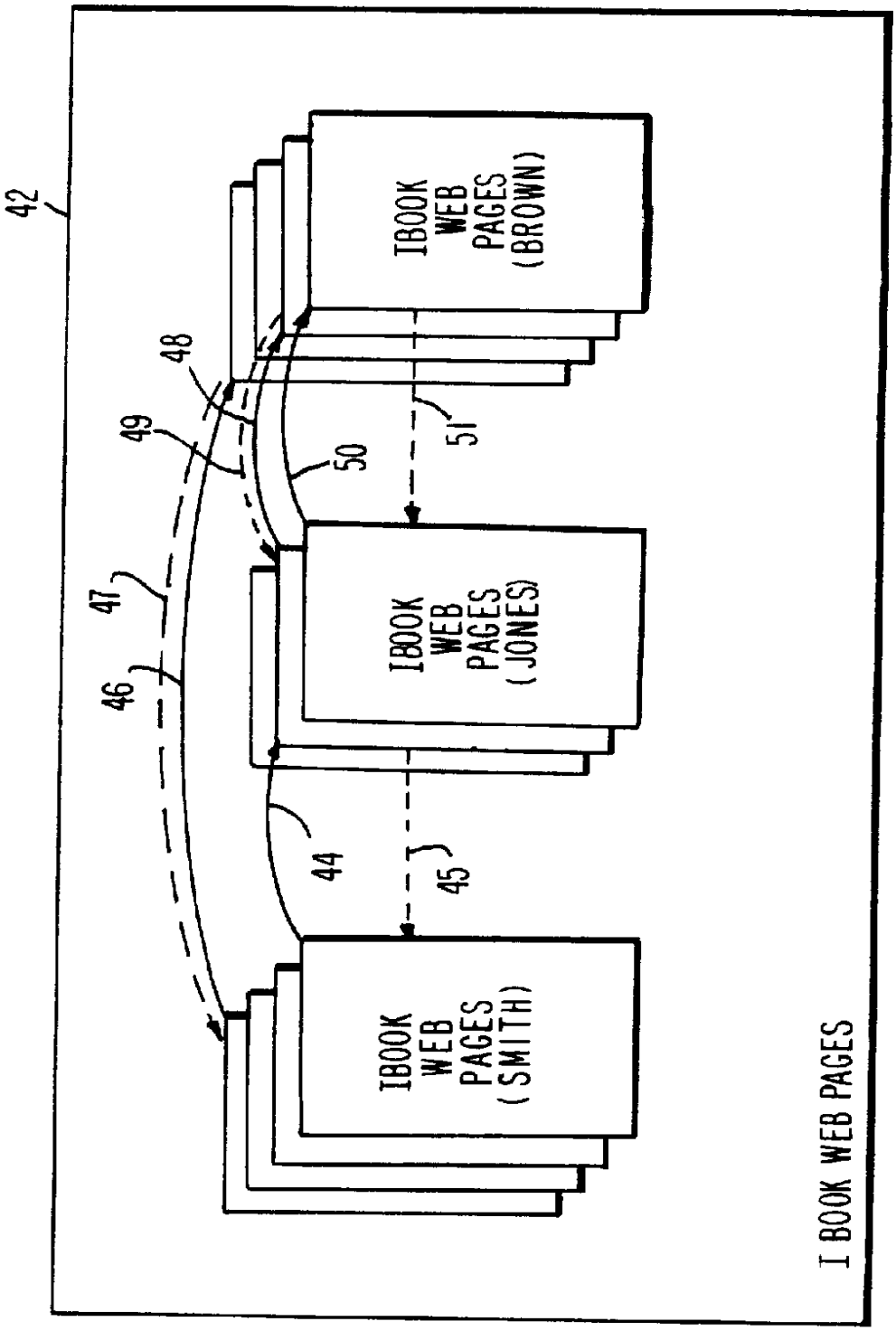

20
DATA NETWORK
34
SEARCH ENGINE SERVER
WEB INDEX
36
40
IBOOK SERVER
IBOOK A
SPONSOR OR PARENT ORGANIZATION
22
IBOOK SERVER
IBOOK A'
SPONSOR
24
IBOOK CLIENT
VIEWER
32
IBOOK CLIENT
CONTRIBUTOR SMITH
26
IBOOK CLIENT
CONTRIBUTOR BROWN
30
IBOOK CLIENT
CONTRIBUTOR JONES
28
38

FIG. 2


42
IBOOK WEB PAGES (BROWN)
IBOOK WEB PAGES (JONES)
IBOOK WEB PAGES (SMITH)
I BOOK WEB PAGES
44
45
46
47
48
49
50
51

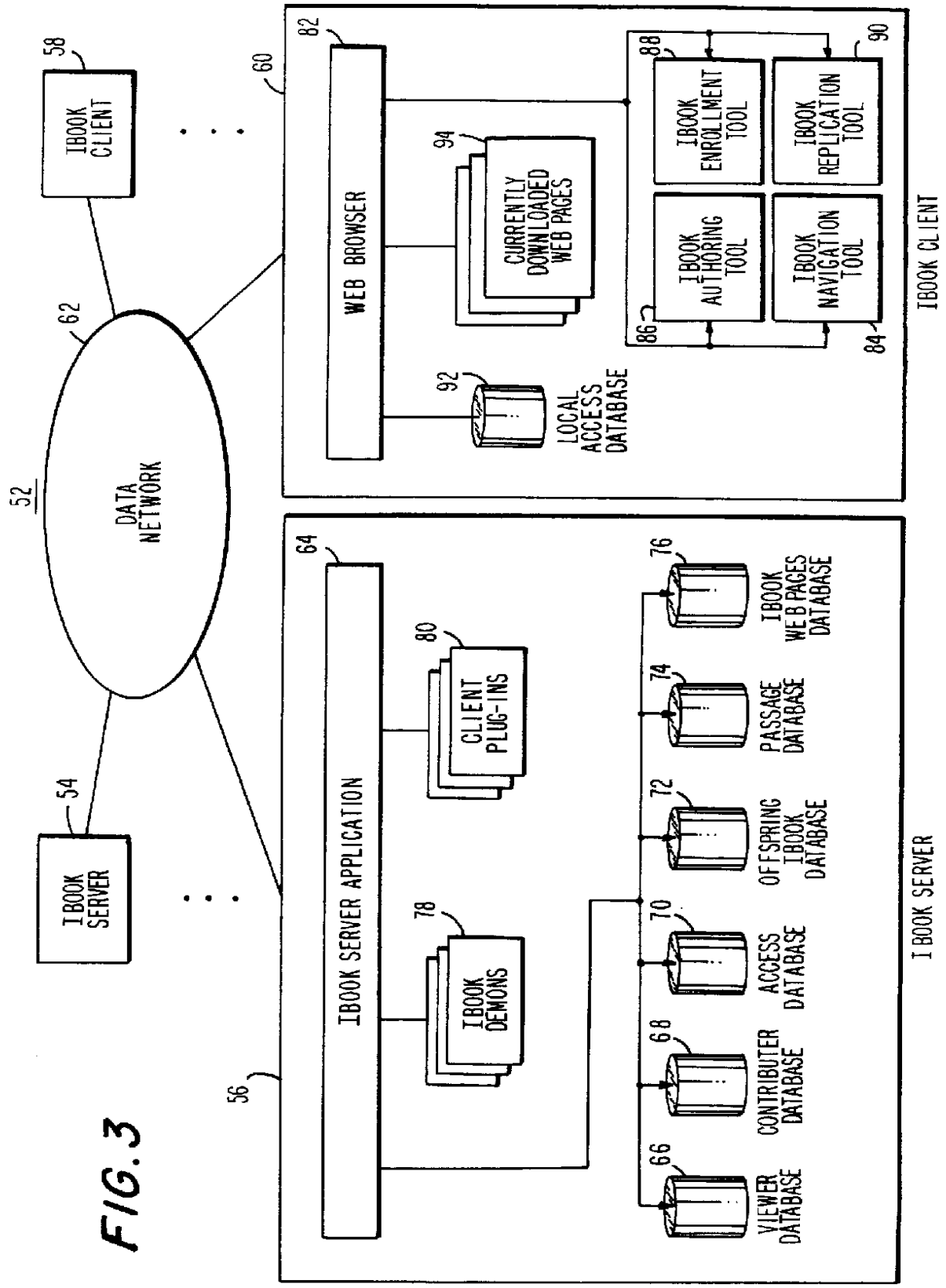

52
DATA NETWORK
62
IBOOK CLIENT
58
IBOOK SERVER
54
60
82
WEB BROWSER
94
CURRENTLY DOWNLOADED WEB PAGES
92
LOCAL ACCESS DATABASE
88
IBOOK ENROLLMENT TOOL
90
IBOOK REPLICATION TOOL
86
IBOOK AUTHORING TOOL
IBOOK NAVIGATION TOOL
84
IBOOK CLIENT
56
64
IBOOK SERVER APPLICATION
80
CLIENT PLUG-INS
78
IBOOK DEMONS
76
IBOOK WEB PAGES DATABASE
74
PASSAGE DATABASE
72
OFFSPRING IBOOK DATABASE
70
ACCESS DATABASE
68
CONTRIBUTER DATABASE
66
VIEWER DATABASE
IBOOK SERVER

FIG. 3

FIG. 4

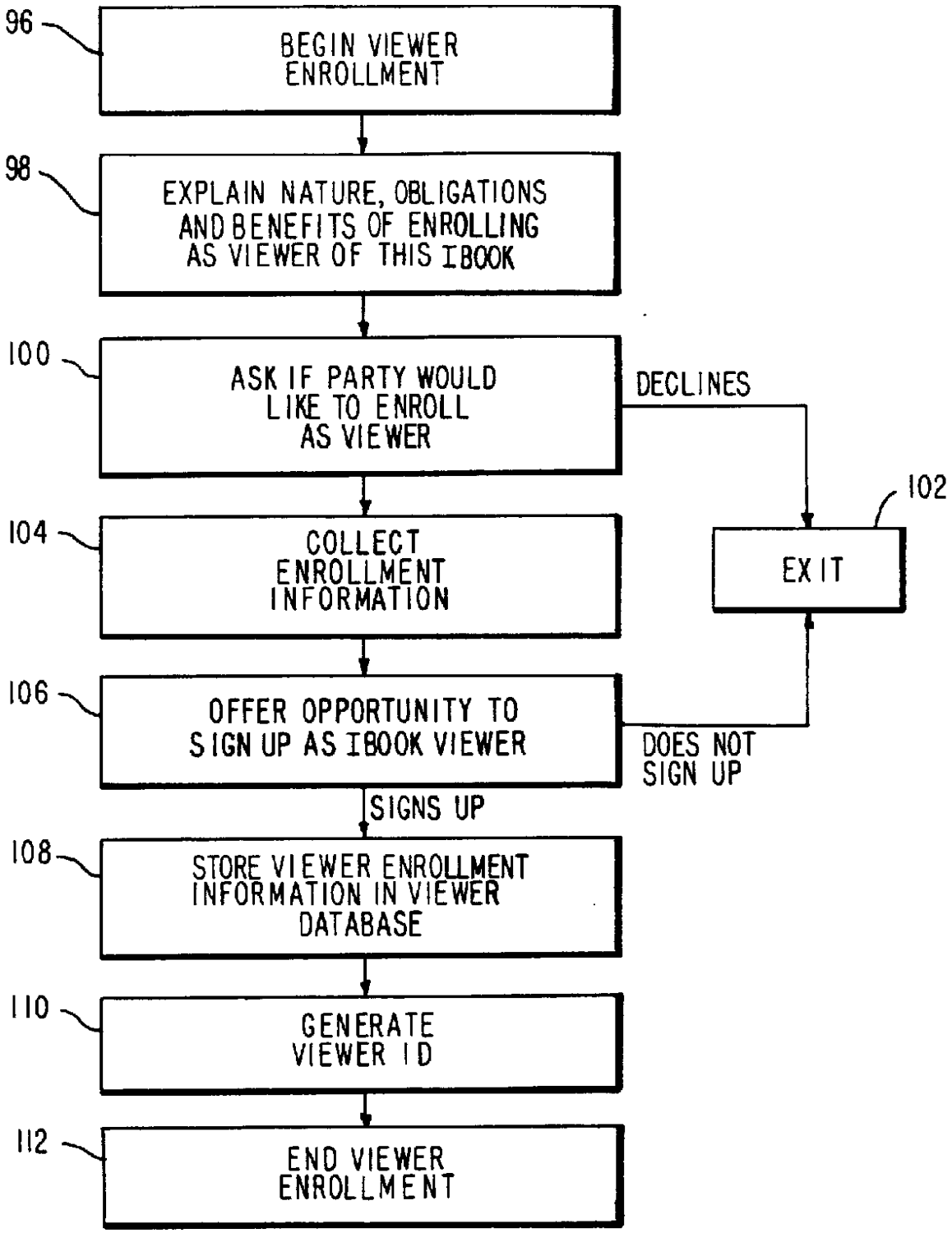
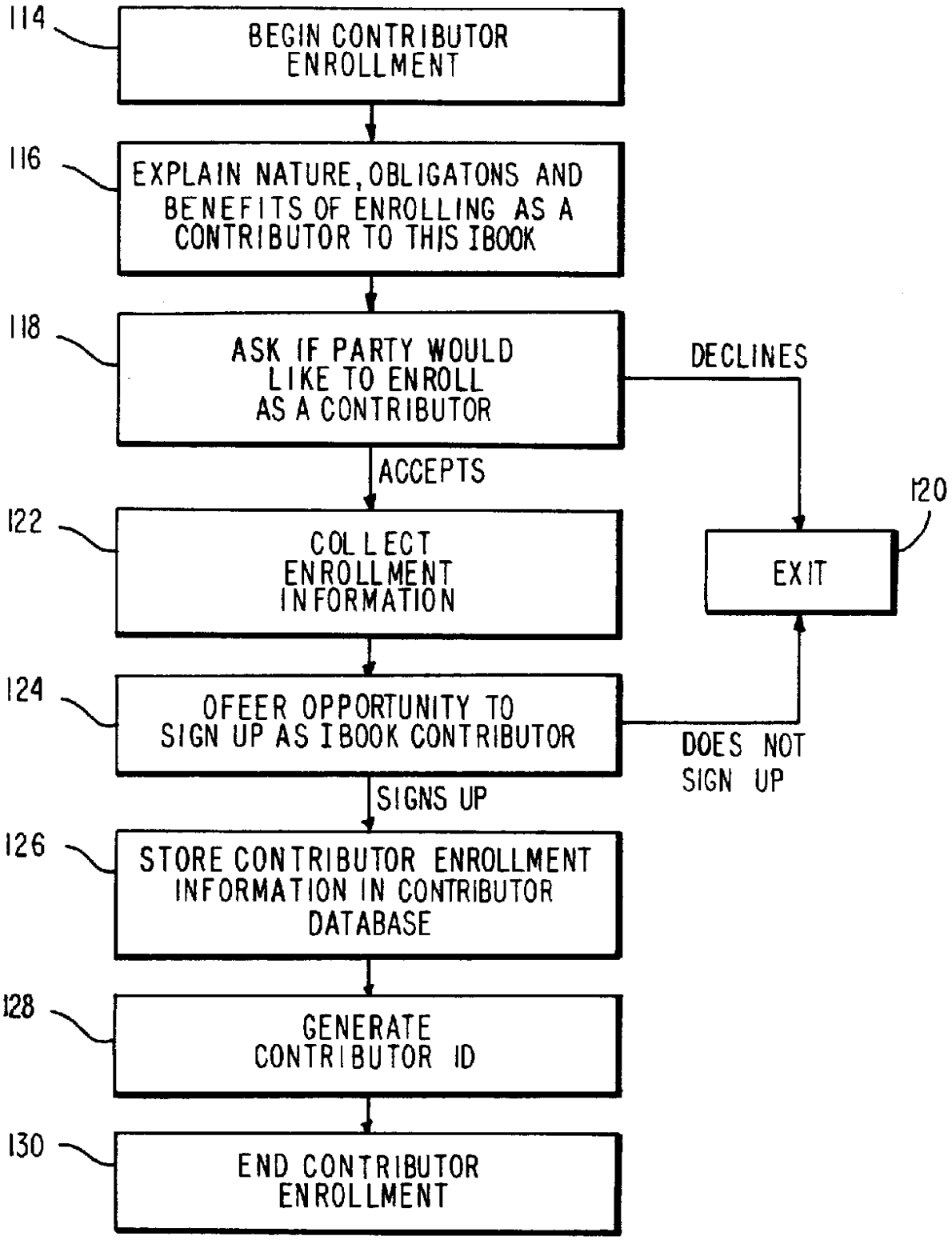

96
BEGIN VIEWER ENROLLMENT
98
EXPLAIN NATURE, OBLIGATIONS AND BENEFITS OF ENROLLING AS VIEWER OF THIS IBOOK
100
ASK IF PARTY WOULD LIKE TO ENROLL AS VIEWER
DECLINES
102
EXIT
104
COLLECT ENROLLMENT INFORMATION
106
OFFER OPPORTUNITY TO SIGN UP AS IBOOK VIEWER
DOES NOT SIGN UP
SIGNS UP
108
STORE VIEWER ENROLLMENT INFORMATION IN VIEWER DATABASE
110
GENERATE VIEWER ID
112
END VIEWER ENROLLMENT

FIG. 5


114
BEGIN CONTRIBUTOR ENROLLMENT
116
EXPLAIN NATURE, OBLIGATONS AND BENEFITS OF ENROLLING AS A CONTRIBUTOR TO THIS IBOOK
118
ASK IF PARTY WOULD LIKE TO ENROLL AS A CONTRIBUTOR
DECLINES
ACCEPTS
120
EXIT
122
COLLECT ENROLLMENT INFORMATION
124
OFEER OPPORTUNITY TO SIGN UP AS IBOOK CONTRIBUTOR
DOES NOT SIGN UP
SIGNS UP
126
STORE CONTRIBUTOR ENROLLMENT INFORMATION IN CONTRIBUTOR DATABASE
128
GENERATE CONTRIBUTOR ID
130
END CONTRIBUTOR ENROLLMENT

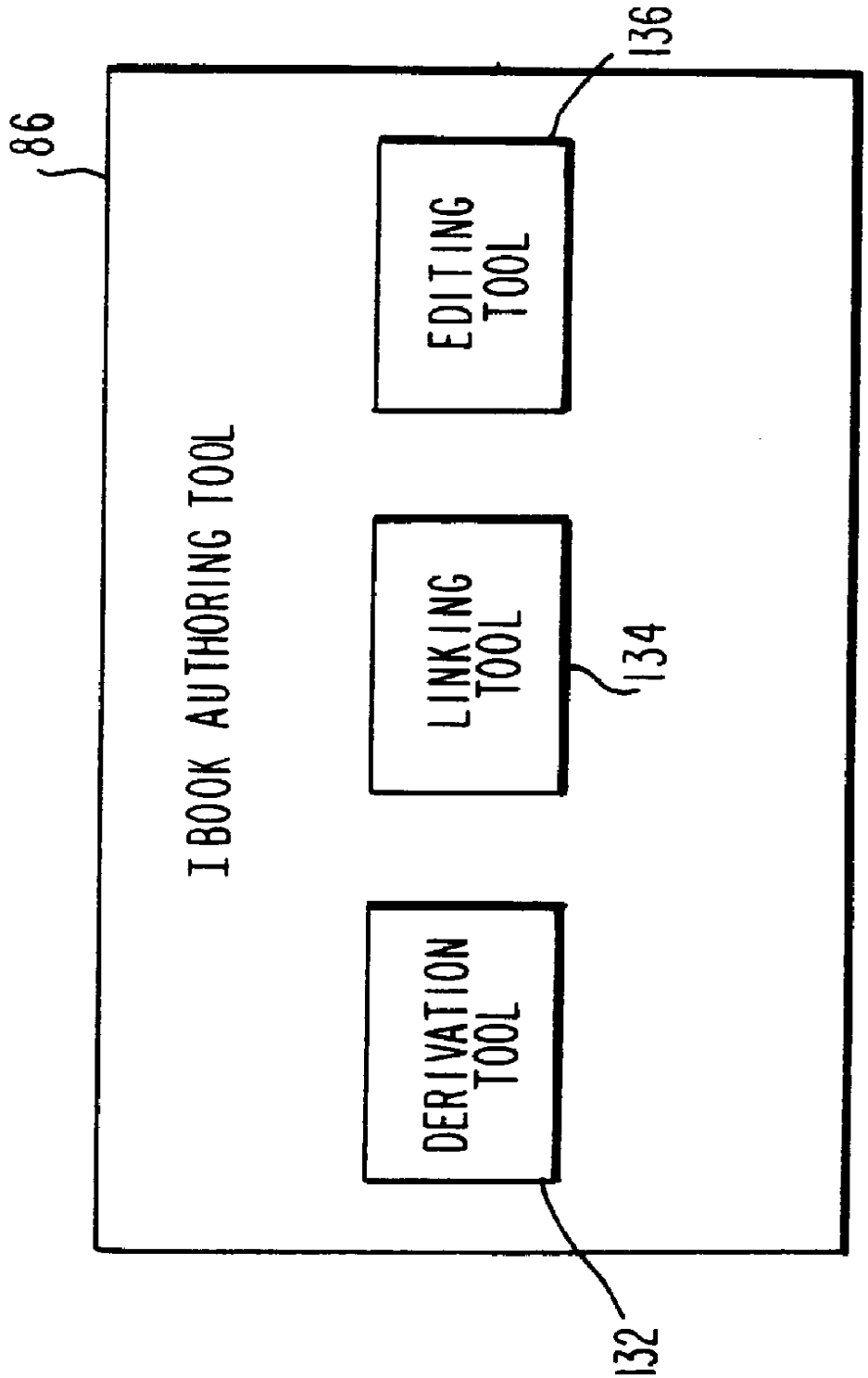

86
136
EDITING TOOL
IBOOK AUTHORING TOOL
LINKING TOOL
134
DERIVATION TOOL
132

FIG. 6

FIG 7

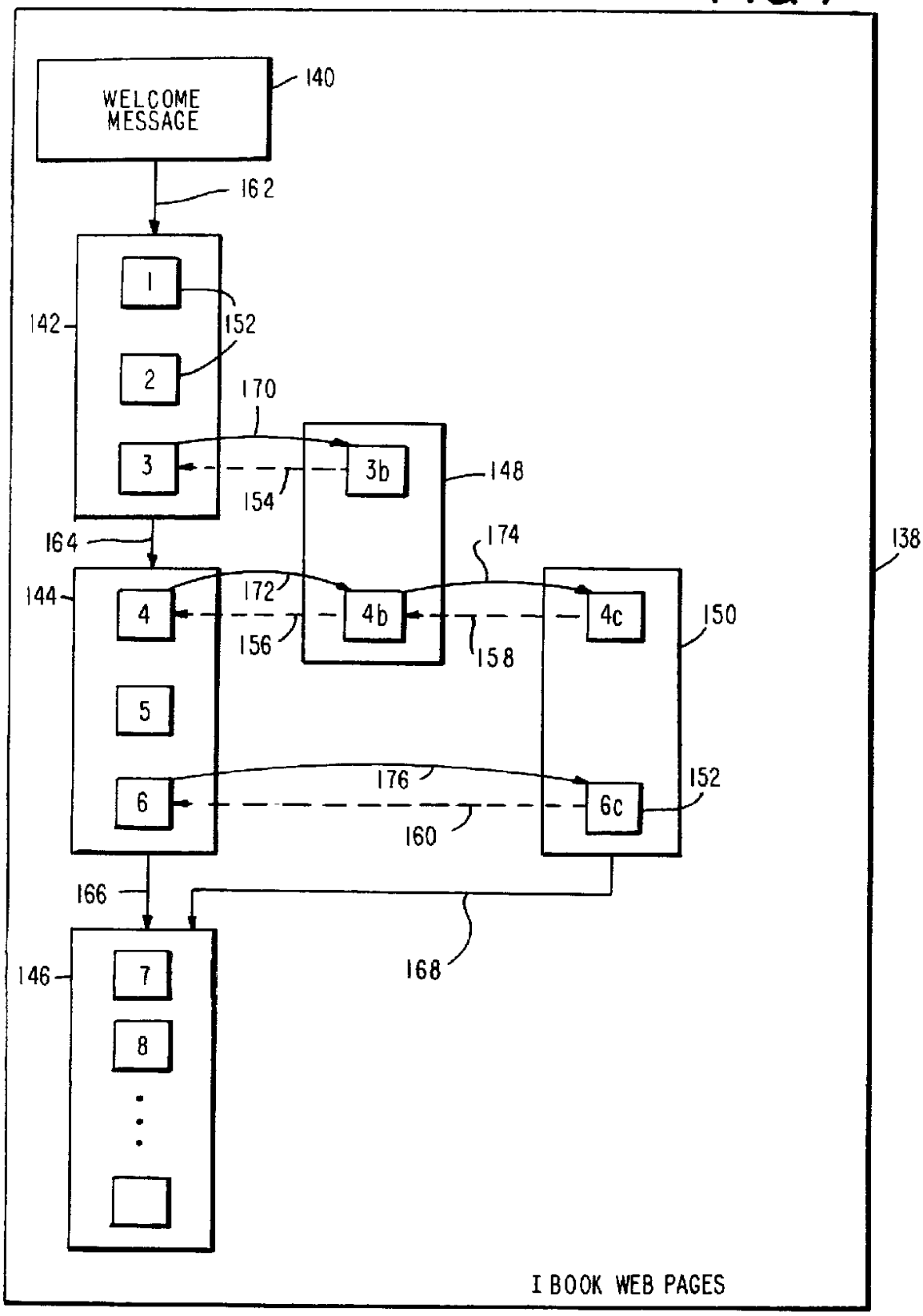
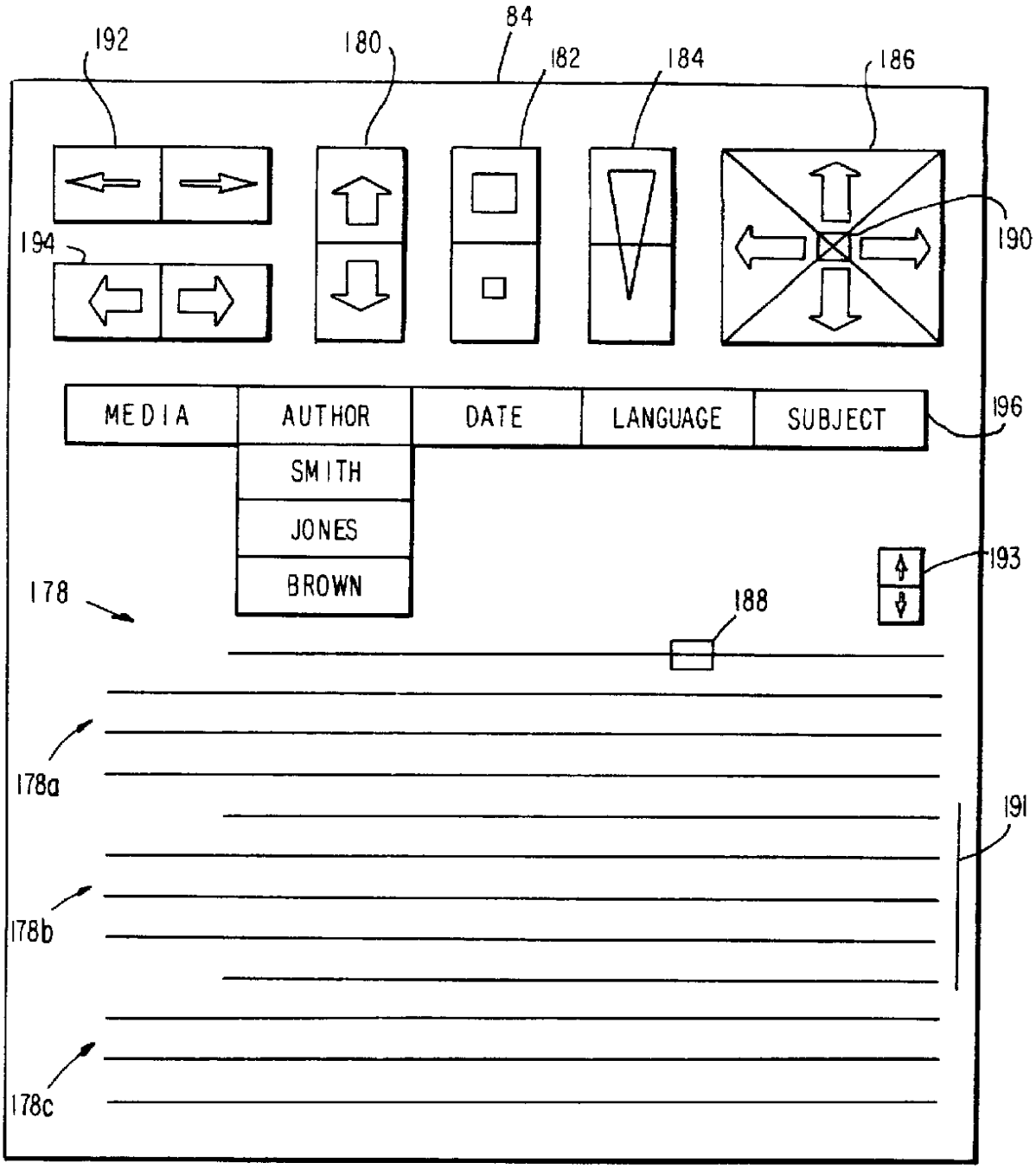

WELCOME MESSAGE
140
162
1
142
152
2
170
3
3b
148
154
164
174
138
144
172
4
4b
4c
150
156
158
5
176
152
6
6c
160
166
168
146
7
8
I BOOK WEB PAGES

FIG. 8


84
192
180
182
184
186
190
194
MEDIA
AUTHOR
DATE
LANGUAGE
SUBJECT
196
SMITH
JONES
BROWN
193
178
188
178a
191
178b
178c

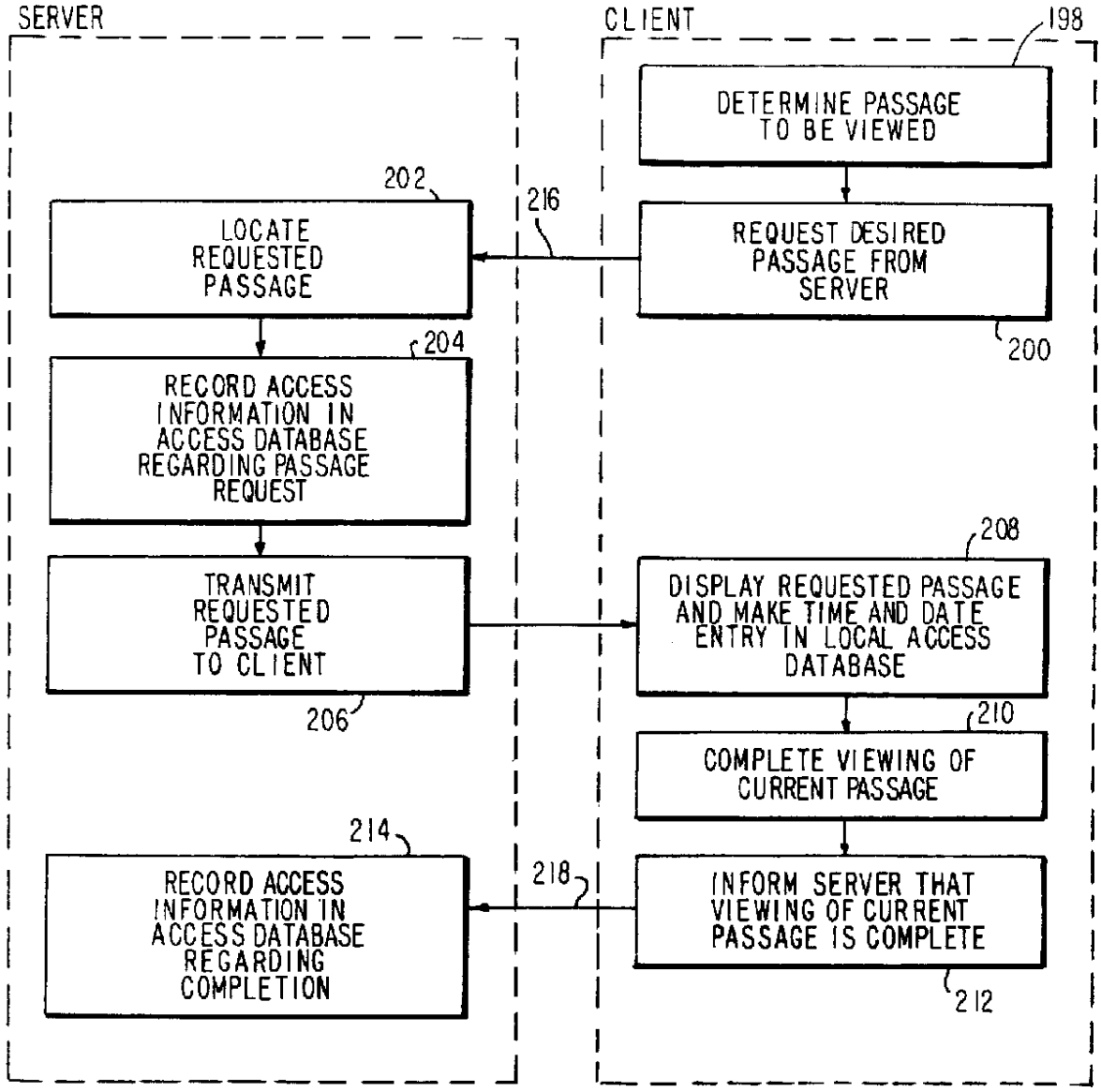

SERVER
CLIENT
198
DETERMINE PASSAGE TO BE VIEWED
202
216
LOCATE REQUESTED PASSAGE
REQUEST DESIRED PASSAGE FROM SERVER
200
204
RECORD ACCESS INFORMATION IN ACCESS DATABASE REGARDING PASSAGE REQUEST
208
TRANSMIT REQUESTED PASSAGE TO CLIENT
206
DISPLAY REQUESTED PASSAGE AND MAKE TIME AND DATE ENTRY IN LOCAL ACCESS DATABASE
210
COMPLETE VIEWING OF CURRENT PASSAGE
214
218
RECORD ACCESS INFORMATION IN ACCESS DATABASE REGARDING COMPLETION
INFORM SERVER THAT VIEWING OF CURRENT PASSAGE IS COMPLETE
212

FIG. 9

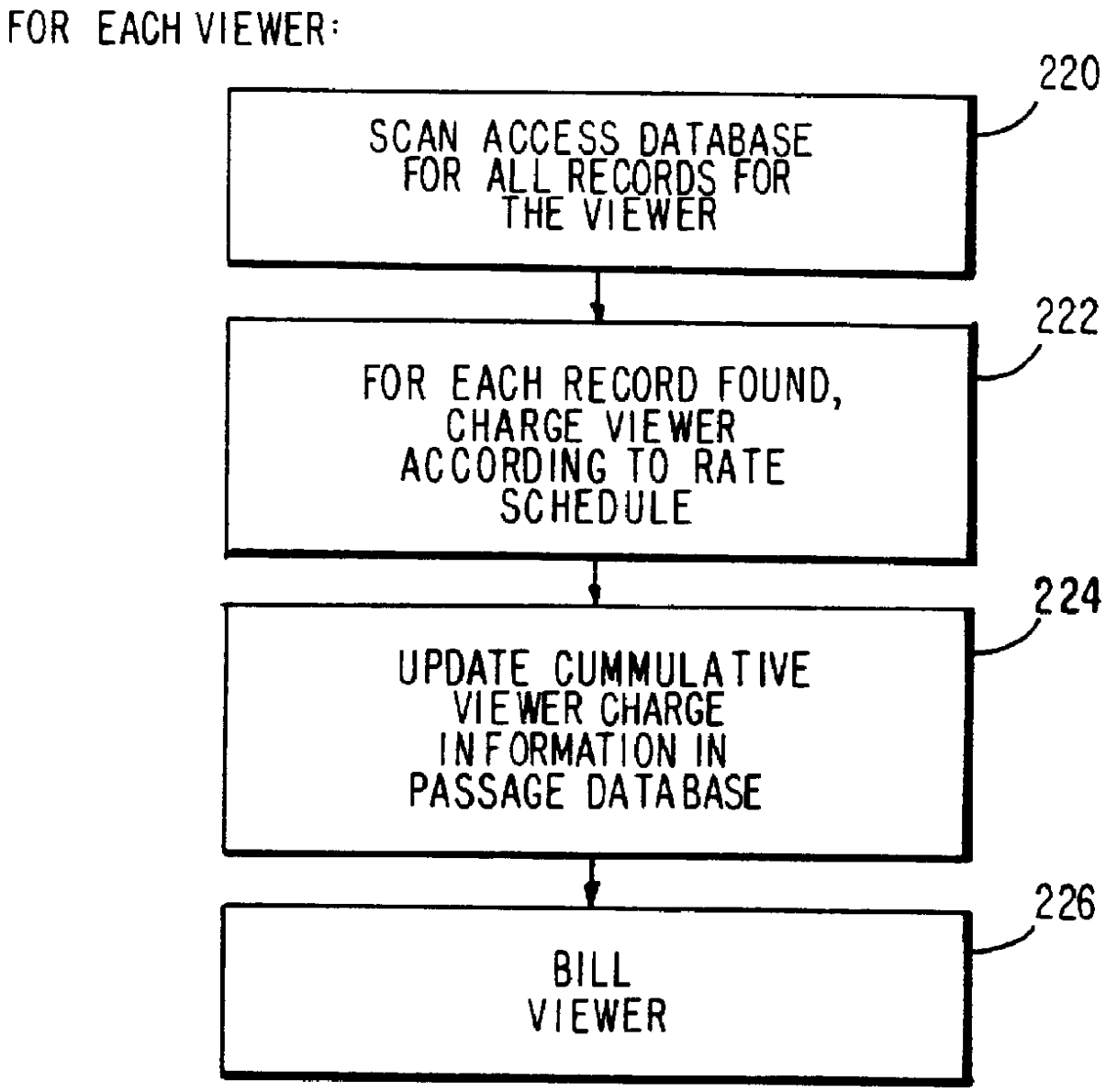

FOR EACH VIEWER:
220
SCAN ACCESS DATABASE FOR ALL RECORDS FOR THE VIEWER
222
FOR EACH RECORD FOUND, CHARGE VIEWER ACCORDING TO RATE SCHEDULE
224
UPDATE CUMMULATIVE VIEWER CHARGE INFORMATION IN PASSAGE DATABASE
226
BILL VIEWER

FIG. 10

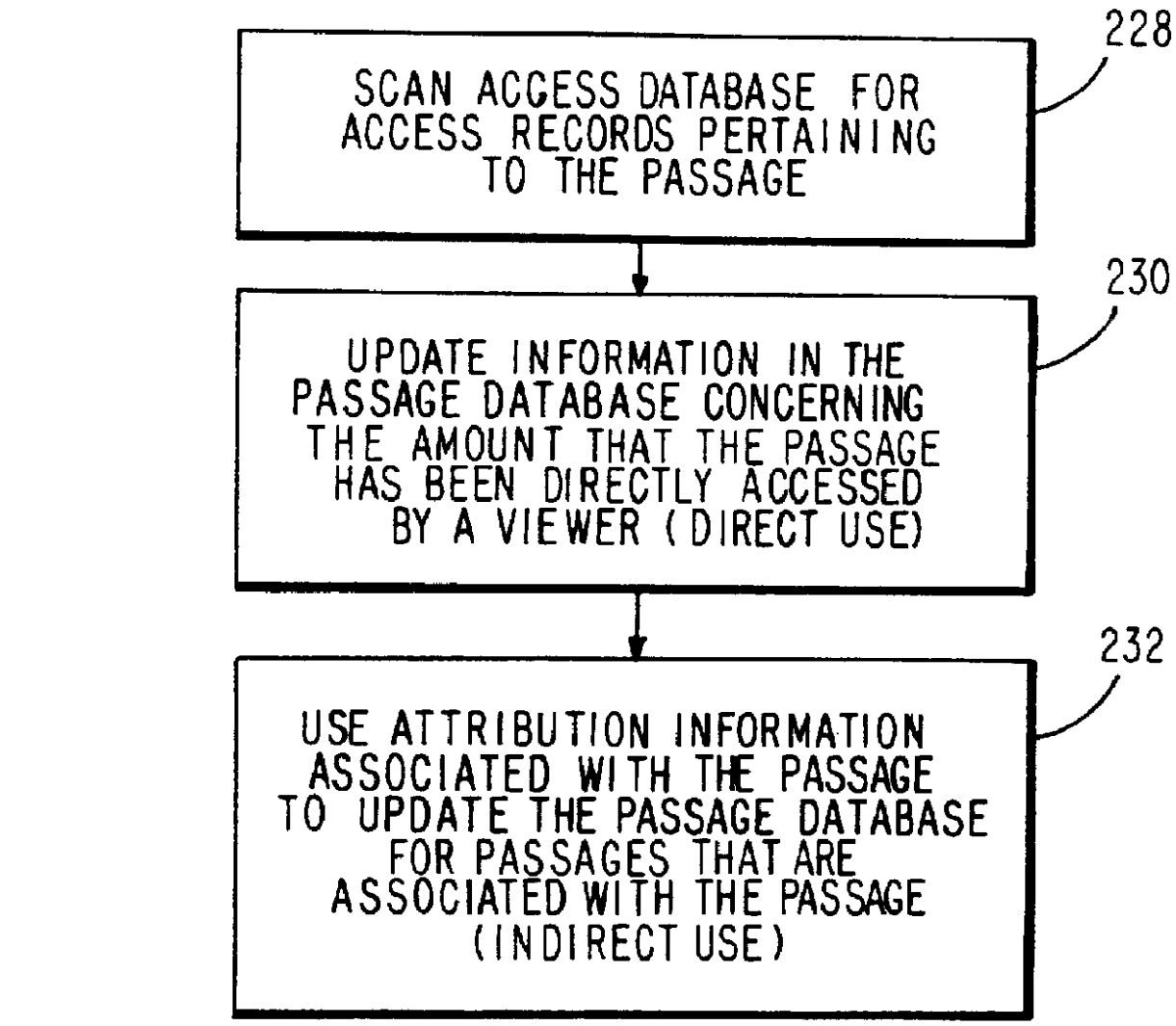

FOR EACH PASSAGE :
228
SCAN ACCESS DATABASE FOR ACCESS RECORDS PERTAINING TO THE PASSAGE
230
UPDATE INFORMATION IN THE PASSAGE DATABASE CONCERNING THE AMOUNT THAT THE PASSAGE HAS BEEN DIRECTLY ACCESSED BY A VIEWER (DIRECT USE)
232
USE ATTRIBUTION INFORMATION ASSOCIATED WITH THE PASSAGE TO UPDATE THE PASSAGE DATABASE FOR PASSAGES THAT ARE ASSOCIATED WITH THE PASSAGE (INDIRECT USE)

FIG. 11

FOR EACH CONTRIBUTOR:

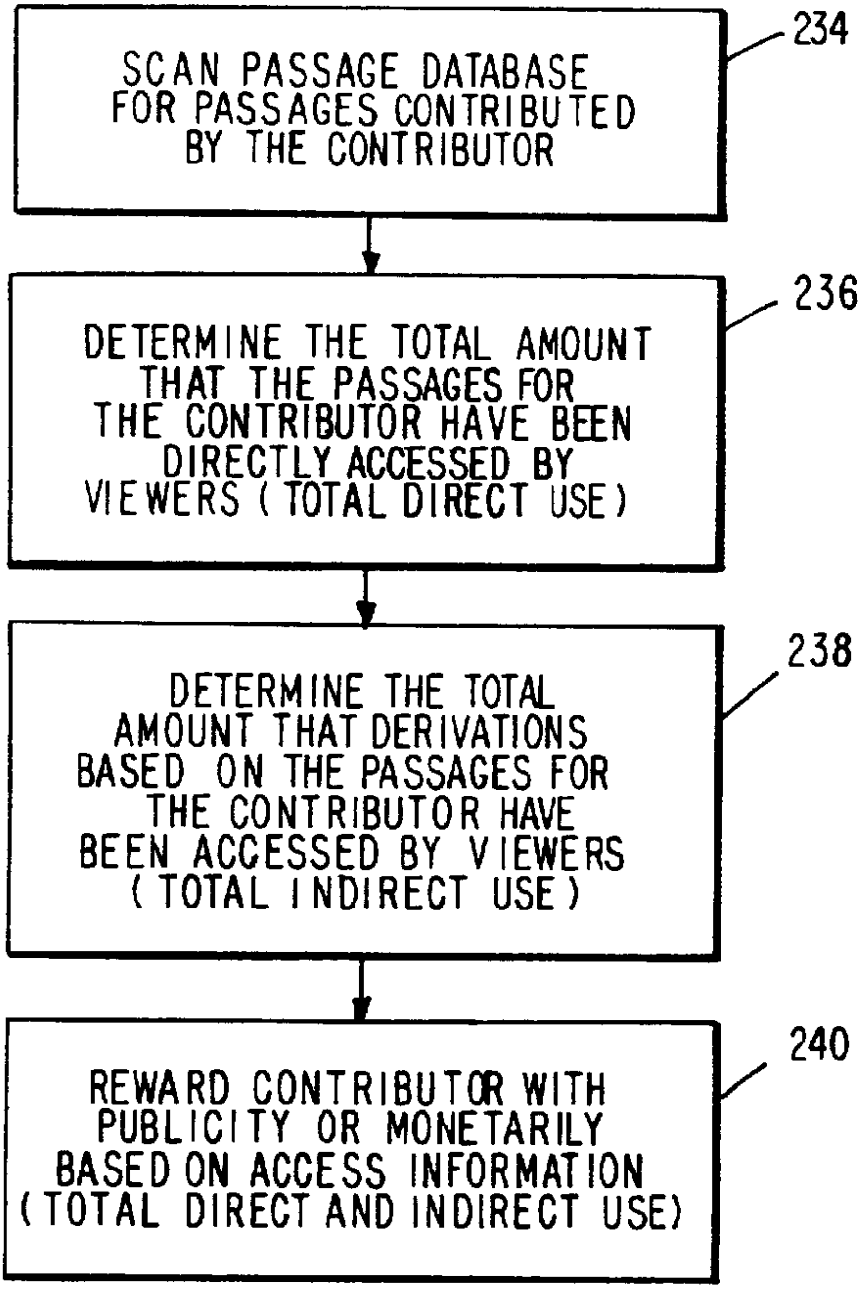


FIG. 12

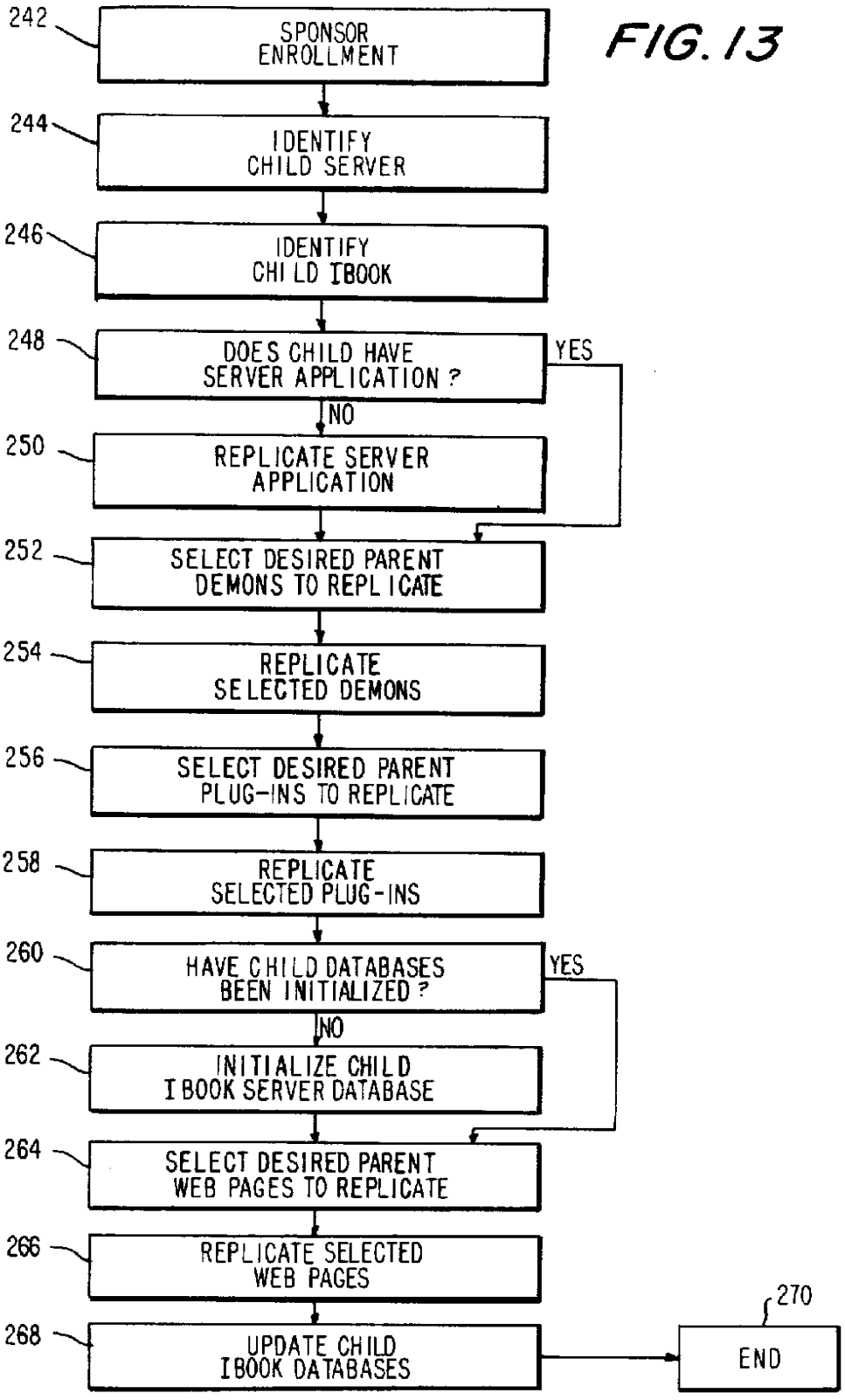

242
SPONSOR ENROLLMENT
244
IDENTIFY CHILD SERVER
246
IDENTIFY CHILD IBOOK
248
DOES CHILD HAVE SERVER APPLICATION ?
YES
NO
250
REPLICATE SERVER APPLICATION
252
SELECT DESIRED PARENT DEMONS TO REPLICATE
254
REPLICATE SELECTED DEMONS
256
SELECT DESIRED PARENT PLUG-INS TO REPLICATE
258
REPLICATE SELECTED PLUG-INS
260
HAVE CHILD DATABASES BEEN INITIALIZED ?
YES
NO
262
INITIALIZE CHILD IBOOK SERVER DATABASE
264
SELECT DESIRED PARENT WEB PAGES TO REPLICATE
266
REPLICATE SELECTED WEB PAGES
268
UPDATE CHILD IBOOK DATABASES
270
END

FIG. 13

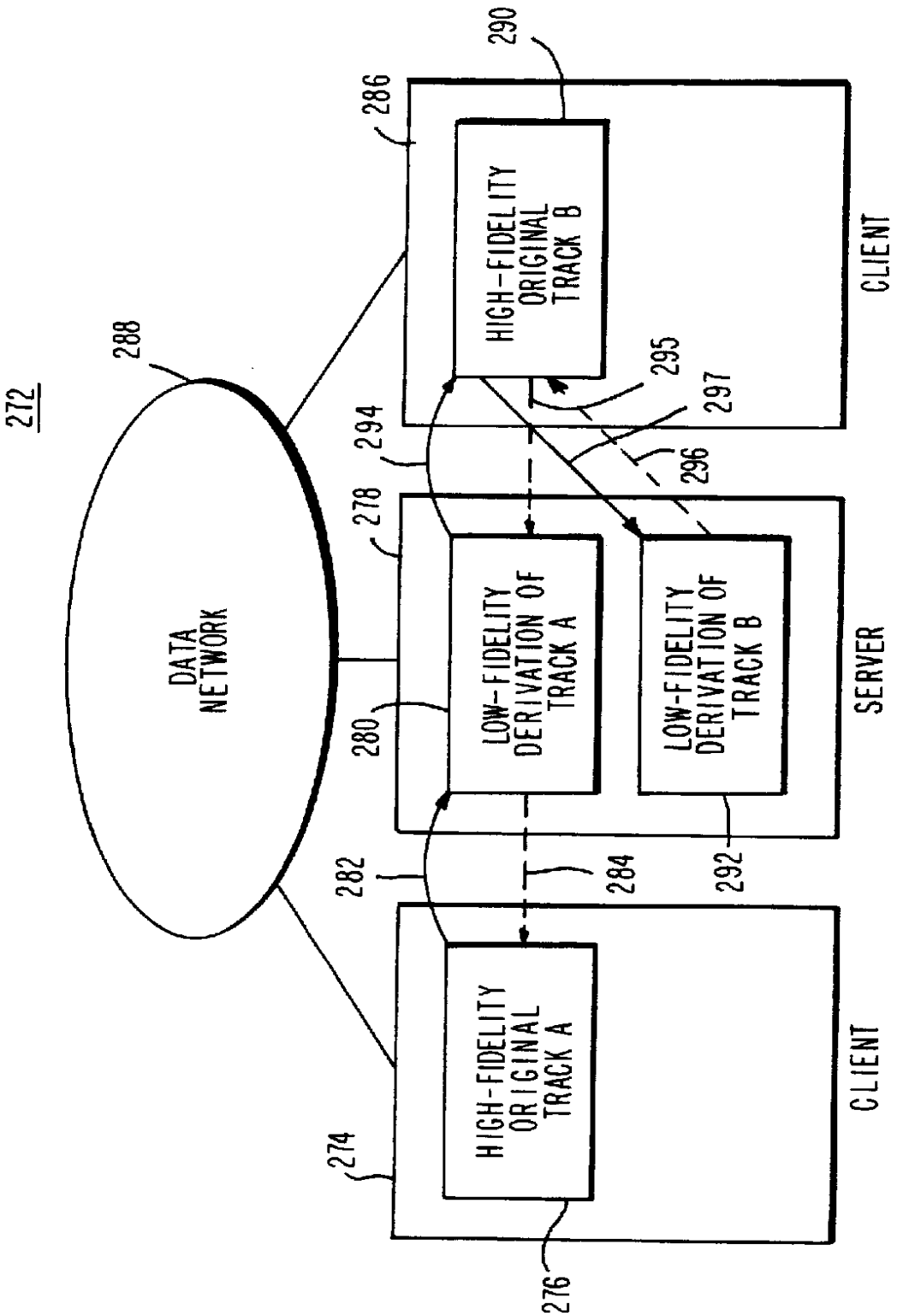

272
DATA NETWORK
288
HIGH-FIDELITY ORIGINAL TRACK B
290
286
CLIENT
295
297
294
296
278
LOW-FIDELITY DERIVATION OF TRACK A
LOW-FIDELITY DERIVATION OF TRACK B
280
SERVER
282
284
292
HIGH-FIDELITY ORIGINAL TRACK A
274
276
CLIENT

FIG. 14

INTERACTIVE WEB BOOK SYSTEM WITH ATTRIBUTION AND DERIVATION FEATURES

This is a continuation, of application Ser. No. 08/735,727, filed Oct. 23, 1996, now U.S. Pat. No. 6,052,717.

BACKGROUND OF THE INVENTION

This invention relates to the Internet, and more particularly, to techniques for creating and viewing material on the World Wide Web in the form of an interactive Web book.

The World Wide Web has made the Internet accessible to a broad range of people. One can search the Web and view a large amount of material using a Web browser. However, there is no satisfactory framework within the Web to encourage contributions of new material while rewarding contributors for their efforts. As a result, many people who might make meaningful contributions of entertaining or educational material to the World Wide Web do not make such contributions.

It is therefore an object of the present invention to provide a way in which to facilitate the contribution of material using a data network such as the World Wide Web and to compensate the contributors of such material.

SUMMARY OF THE INVENTION

This and other objects of the invention are accomplished in accordance with the principles of the present invention by providing an interactive Web book ("ibook") system. An ibook is a self-extending, self-sustaining information-redistributing Web robot, which is resident on a data network such as the Internet or an intranet. Material in an ibook is preferably organized in the form of Web pages. Material may be in text, two-dimensional, three-dimensional or n-dimensional graphics, animation, audio, video, source or executable code, or any type of multimedia format. Within each Web page, material may be organized in passages. Passages can be of any suitable size, such as a paragraph for textual material, or a video or audio clip of a certain length for multimedia material.

Users can preferably enroll as viewers of the ibook or as contributors to the ibook. Viewers are allowed to view (i.e., read, hear, observe, observe the behavior of, etc.) material in the ibook. Presentation of ibook material for viewing may involve the execution of computer code associated with or contained in that material. Contributors can view material and can contribute material. The contributed material can be original or can be based on the work of other contributors.

Works that are created based on previously contributed material are called derivations. When a contributor uses certain authoring functions in the ibook system, such as by performing a cut and paste operation from existing material or by using a compiler of the contributor's to compile existing source code, attribution links are automatically formed between the material in the derivation and the original material. This attribution information is preferably used by the ibook system in rewarding contributors. Contributors are rewarded based on the amount that their material is accessed by viewers. The more often a contributor's material is used (either directly or indirectly), the more that contributor will be rewarded. Preferably, the reward may be made in the form of an automatic monetary distribution by the ibook system.

As ibook material is created, derivation information is compiled that can be used by the ibook navigation system when a user desires to view material in an ibook. For example, when viewing a passage for which a derivation exists, the viewer can be presented with the option of viewing the derivation. The viewer is also presented with options for navigating through the material in an ibook based on a selected author, subject matter, media type, etc.

The ibook system may automatically advertise its presence to various search engines by transmitting suitable keyword information (e.g., keyword information identifying the subject matter of the contents of the ibook) to databases associated with the search engines.

If desired, new ibooks may be spawned by replicating the content and structure of an existing ibook. Replicating may be achieved by copying material or by creating references from the new ibook to the existing ibook.

Further features of the invention, its nature and various advantages will be more apparent from the accompanying drawings and the following detailed description of the preferred embodiments.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** is a system diagram showing interactive Web book servers and interactive Web book clients interconnected by a data network.

FIG. **2** is a diagram showing the content of an illustrative interactive Web book.

FIG. **3** is a detailed diagram of an interactive Web book server and an interactive Web book client interconnected by a data network.

FIG. **4** is a flow chart of the process of enrolling a viewer.

FIG. **5** is a flow chart of the process of enrolling a contributor.

FIG. **6** is a diagram of an interactive Web book authoring tool.

FIG. **7** is a detailed diagram of the structure of an interactive Web book.

FIG. **8** is a diagram of an interactive Web book navigation tool.

FIG. **9** is a flow chart of the process by which a user at a client accesses material at a server.

FIG. **10** is a flow chart of the process of determining the amount of ibook material a user has viewed and billing the user accordingly.

FIG. **11** is a flow chart of the process of updating the passage database to reflect the amount that the passages have been directly used by viewing or indirectly used.

FIG. **12** is a flow chart of the process of determining the amount that each contributor's material has been used and rewarding the contributors accordingly.

FIG. **13** is a flow chart of the process of replicating an ibook.

FIG. **14** is a system diagram showing how ibook content may be distributed among clients and servers.

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS

An interactive Web book ("ibook") system **20** is shown in FIG. **1**. Web server computers that support one or more ibooks are called ibook servers. Ibook servers **22** and **24** are interconnected with ibook client computers **26**, **28**, **30**, and **32** via data network **34**. Also connected to data network **34** is search engine server **36**. Data network **34** is preferably a packet-based data network such as the Internet or an intranet

(i.e., a local area network (LAN) or wide area network (WAN) using Internet protocols). Communication paths **38** are modem lines or LAN or WAN network connections.

Contributors at ibook clients **26**, **28**, and **30** can contribute material to an ibook, such as ibook A' on server **24**. The contributed material can be in any media type supported by the Internet, such as text, audio, and video information. Some contributed material may be literary or artistic in nature, such as an essay, song, painting, or movie. Other contributed material may be of a more technical or utilitarian nature, such as the source code for computer program modules (e.g., modules of code implementing ibook functions, such as demons or plug-ins) or descriptions of inventive ideas. An ibook may contain a number of different types of contributions, such as essays, songs, and video clips, structured around a central theme. If desired, ibooks may be set up to support more limited types of media and more focused formats. For example, an ibook might be devoted to a mystery novel, might contain only contemporary music, or might be devoted to a programming environment for a particular computer programming language.

Ibooks may initially be supported by a sponsor who sets up an ibook on an ibook server and who may, for example, advertise that ibook's presence and chosen theme by arranging to have suitable information regarding the ibook included in Web index **40**. One way in which to set up an ibook is to replicate the structure and possibly the contents of an existing ibook. For example, a sponsor at ibook server **24** might replicate ibook A from the ibook server **22** of a parent organization thereby creating ibook A' at ibook server **24**.

People who wish to contribute content to an ibook must typically enroll with that ibook prior to making any contributions. Each ibook therefore has an associated community of contributors. Although contributors to an ibook may often make contributions that are completely their own, contributors may also make contributions that are based upon the previously contributed material of another contributor or contributors. The ultimate contents of a given ibook is therefore usually a collaborative effort between many contributors.

A viewer at ibook client **32** can preferably view the material contributed to an ibook without enrolling as a contributor. "Viewing" (by a contributor or by a viewer) includes reading, listening, and observing any type of contributed material that is contained in an ibook and its behavior. Presentation of ibook material for viewing may involve the execution of computer code associated with or contained in that material.

Contributed material is preferably stored in the form of ibook web pages **42**, as shown in FIG. **2**. An important aspect of any ibook is that it allows derivations of contributed material to be created by adding additional Web pages. The ibook system supports derivations that are alternate versions of existing works. For example, if contributor Smith writes several chapters of a book, contributor Jones may modify a chapter to create his own alternate version of that chapter. An association between the original and alternate versions of this material is preferably automatically made by the ibook system. The association is indicated by forming derivation link **44** and attribution link **45**.

If contributor Brown creates alternate versions of the material of contributors Smith and Jones, derivation links **46**, **48**, and **50** and attribution links **47**, **49**, and **51** are formed. Derivation and attribution links are used by the system when navigating through ibook Web pages **42**. For example, when a viewer wishes to view a given portion of an ibook, derivation links **46**, **48**, and **50** may be used to present the viewer with the option of viewing the alternate versions of the material as well as the original version. Likewise, attribution links **47**, **49**, and **51** may be used to present the viewer with the option of viewing the original version of an alternate version.

In addition to creating derivations that are alternate versions of existing material, contributors can create derivations which are usually viewed in parallel to existing material. For example, a contributor may wish to create a running commentary on a multimedia segment or a song. Although the commentary is not an alternate version of the existing material, it is related in such a way that it is appropriate to recognize the original contributor. Another example is multiple audio tracks, which may be listened to and mixed in varying proportions in parallel. The ibook system facilitates the automatic or nearly automatic generation of derivation and attribution links between the original material and the derivations. The ibook system uses the attribution link information for navigating and to ensure that contributors are rewarded for their efforts. The ibook system uses the derivation link information to facilitate navigation through ibook material and thereby encourage contributions by ensuring that a contributor's material may be viewed.

A derivation may contain a quotation of existing material when a contributor creates material that is in part the same as that previously contributed by another contributor.

A derivation may be a revision of a work if it contains all of the previous work except errors and material that the contributor believes is inappropriate. The revision may have additional material that the contributor believes should have been in the original work. For example, the original material might be a rough draft of a speech, whereas the revision might be the final draft of the speech.

A derivation may be a combination containing material derived from two separate sources. For example, a derivation might be a story containing portions of stories from two different authors or a sequence of musical fragments from different composers or a mix of multiple tracks into a single song.

A derivation may be a sequel in which the subject, characters, and context of a previous work are extended into a new area. A sequel is typically intended to be viewed after the original, rather than in place of the original.

A derivation may be a transcription that contains material in a different media or language than the original material. For example, the original might contain English text and the transcription might contain the same material in French. Alternatively, the original material might contain the score of a song and the transcription might contain a recording of a performer singing the song. If the original contains a Java script for an applet, the transcription might contain an Active object that performs the same function as the Java script. If the original contains computer source code, the transcription may contain a translated or compiled version of the code.

A derivation may be an invocation which may be encountered, e.g., in the programming context. An invocation employs the contents and capabilities of an original work for the benefit of the invocation. If the original material changes, these changes are presented the next time that the invocation is viewed. Invocations therefore allow for a dynamic reference to previously contributed material.

A derivation may contain the same material as an existing work, but with a different quality or resolution. For example, it may be desired to store a high fidelity audio track at one

location and a lower fidelity version of the same track at a different location.

A collaborative derivation may be created by a contributor who is viewing the work of another contributor without explicitly incorporating the work of the other contributor. For example, a composer may create a track of a song while listening to an existing track of another composer.

FIG. **3** is a more detailed view of the system of FIG. **1**. In ibook system **52**, ibook servers **54** and **56** are interconnected with ibook clients **58** and **60** via data network **62**. Ibook servers **54** and **56** are preferably computers or clusters of computers sufficiently powerful to handle Web traffic from numerous clients. If desired, the functions of servers **54** and **56** may be divided among several servers, which may be geographically remote from each other. For example, the database functions of server **54** could be provided by a database server connected to server **54** directly or through data network **62**. Ibook clients **58** and **60** may be personal computers. At times, clients **58** may store ibook material and may perform server-like functions. Data network **62** is preferably a packet-based data network such as the Internet or an intranet.

Ibook functions are preferably performed by executing instructions with ibook server **56** and with client **60**. Ibook server application **64** directs the overall operation of ibook server **56**. In particular, ibook server application **64** controls databases **66**, **68**, **70**, **72**, **74**, and **76**, in which various ibook information is stored. Ibook demons **78** are programs associated with ibook server application **64**, but which run continuously or semicontinuously in the background. Ibook demons **78** perform functions such as revenue collection, revenue distribution, and advertising.

Client plug-ins **80** are downloadable executable program modules that can be run on client **60** in conjunction with Web browser **82** to add additional capabilities to Web browser **82**. Web browser **82** is preferably a standard Web browser, such as Microsoft Internet Explorer or Netscape Navigator. Downloading of client plug-ins **80** can be accomplished using standard techniques, such as the standard Internet file transfer protocol (FTP). When client plug-ins **80** are downloaded onto client **60**, they form tools **84**, **86**, **88**, and **90**. Web browser **82** also controls local access database **92**, which may be used to store information regarding the amount of time a user (i.e., a viewer or a viewing contributor) spends viewing a particular portion of an ibook. Currently downloaded Web pages **94** are downloaded from ibook Web pages database **76**.

Users of a given ibook are preferably either enrolled as viewers or contributors. Viewers can view any of the material in an ibook with which they have enrolled, but cannot make contributions to the ibook. Contributors can contribute new material or can create a derivation based on previously contributed material in an ibook. Because contributors must be able to view material before it can used to create a derivation, contributors are also given rights to view ibook material.

By enrolling, both viewers and contributors agree not to violate the rights of other contributors (e.g., by copying material from an ibook without permission). Contributors must also agree to allow their works to become the basis for the works of other contributors, so that participating in an ibook is a collaborative effort.

Enrollment is preferably automated and on-line. At ibook client **60**, the functions necessary to support enrollment are provided by ibook enrollment tool **88** and web browser **82**. At ibook server **56**, enrollment functions are provided by ibook server application **64**. Ibook server application **64** downloads enrollment tool **88** to ibook client **60**, and stores enrollment information in the ibook server databases. Ibook server application stores viewer enrollment information in viewer database **66** and contributor enrollment information in contributor database **68**.

A suitable process for enrolling viewers is shown in FIG. **4**. At step **96**, an interested party begins the process of enrolling as a viewer, e.g., by clicking on an icon labeled "enroll as viewer." The nature, obligations, and benefits of enrolling as a viewer of the ibook are explained to the interested party at step **98**. At step **100**, the party is asked whether enrollment is desired. If the party declines enrollment at step **100**, viewer enrollment terminates at step **102**. If the party accepts enrollment, enrollment information, such as the party's address, electronic billing information, credit card number, etc., is collected at step **104**.

Provided that the enrollment information collected at step **104** does not reveal a reason that the party cannot be enrolled, the party is offered an opportunity to sign up as an ibook viewer at step **106**. If the party does not sign up at step **106**, viewer enrollment terminates at step **102**. If the party decides to sign up, signing up can be accomplished by a number of techniques, including clicking on an icon, typing the words "I ACCEPT", transmitting an electronic signature, live teleconference with an ibook representative, voice-mail, fax, mail, or a combination of these techniques. After signing up at step **106**, information concerning the viewer and the viewer enrollment process is stored in viewer database **66** at step **108**.

At step **110**, ibook server application **64** generates a viewer ID for the viewer. The viewer ID is used to access the ibook with which the viewer has enrolled. If desired, the viewer ID can be used in conjunction with additional security measures, such as a password, etc. The viewer enrollment process ends at step **112**.

A suitable process for enrolling contributors is shown in FIG. **5**. At step **114**, an interested party begins the process of enrolling as a contributor, e.g., by clicking on an icon labeled "enroll as contributor." The nature, obligations, and benefits of enrolling as a contributor of the ibook are explained to the interested party at step **116**. At step **118**, the party is asked whether enrollment is desired. If the party declines enrollment at step **118**, contributor enrollment terminates at step **120**. If the party accepts enrollment, enrollment information, such as the party's address and electronic banking information, is collected at step **122**.

Provided that the enrollment information collected at step **122** does not reveal a reason that the party cannot be enrolled, the party is offered an opportunity to sign up as an ibook contributor at step **124**. If the party does not sign up at step **124**, contributor enrollment terminates at step **120**. If the party decides to sign up, signing up can be accomplished by a number of suitable techniques, including clicking on an icon, typing the words "I ACCEPT", transmitting an electronic signature, live teleconference with an ibook representative, voice-mail, fax, mail, or a combination of these techniques. After signing up at step **124**, information concerning the contributor and the contributor enrollment process is stored in contributor database **68** (FIG. **3**) at step **126**. At step **128**, ibook server application **64** generates a contributor ID for the contributor. The contributor ID is used to access the ibook with which the contributor has enrolled. If desired, the contributor ID can be used in conjunction with additional security measures, such as a password, etc. The contributor enrollment process ends at step **130**.

Once enrolled with an ibook, a contributor may view material in the ibook, may create new original material, or may contribute material derived from that contributed by other contributors to create a derivation. Derivation types supported by the ibook system include alternate versions, commentaries, quotations, revisions, combinations, sequels, transcriptions, invocations, alternate resolutions, and collaborations. To create or modify material in an ibook, a contributor uses ibook authoring tool **86** (FIG. **3**). As shown in FIG. **6**, ibook authoring tool **86** includes derivation tool **132**, linking tool **134**, and editing tool **136**. Editing tool **136** is used to enter original material and linking tool **134** is used to create hypertext links to existing material.

Derivation tool **132** is used to create material based on existing material. Preferably, derivation tool **132** provides style templates for different types of derivations. When a contributor wishes to create a derivation based on existing material, the contributor selects from the available derivation types (e.g., alternate version, commentary, quotation, revision, combination, sequel, transcription, invocation, alternate resolution, and collaboration). When the contributor creates the derivation, (e.g., by creating commentary based on an existing video work), derivation tool **132** automatically or semi-automatically generates attribution information identifying the work from which the derivation was derived. Attribution information may be automatically generated by navigation tool **132** when a contributor creates a derivation of existing source code (e.g., using the contributor's compiler).

The functions provided by authoring tool **86** ay differ depending on the content of a particular ibook passage. For example, editing tool **136** preferably supports standard word processing functions for entering text and source code and supports graphics, animation, audio, and video editing functions for creating and modifying multimedia material. Editing tool **136** also preferably supports creation of audio material from telephone calls and audio-visual material from video conferencing sources. Authoring tool **86** preferably prevents the deletion of previously contributed material and facilitates the creation of material derived from previously contributed material.

The structure of the content of an illustrative ibook is shown in detail in FIG. **7**. The material contributed to an ibook is contained in one or more Web pages. The content of the ibook Web pages is preferably stored in ibook Web pages database **76** (FIG. **3**). Ibook Web pages **138** may contain both static Web pages and Web pages with content that changes dynamically whenever referenced. Web pages **138** include welcome message page **140** to introduce a user to the ibook. If desired, welcome message page **140** can include summary information concerning the content of ibook web pages **138**. For example, welcome message page **140** can include information regarding the authors who have contributed material, the dates on which material was contributed, the sponsor's description of the theme of the ibook, the specific subject matter contained in the ibook, the media used, etc. Welcome page **140** preferably includes hypertext links to viewer, contributor, and sponsor enrollment pages. It is not possible to proceed past welcome page **140** without enrolling with the ibook. After viewing welcome message page **140** and completing an appropriate enrollment process, users can view, add, or create derivative material using authoring tool **86** (FIGS. **3** and **6**).

In FIG. **7**, ibook Web pages **142**, **144**, **146** were contributed by contributor Smith, ibook Web page **148** was contributed by contributor Jones, and ibook Web page **150** was contributed by contributor Brown. Contributor Smith was the first contributor, and his pages were added as original material. Contributor Jones added material that was based on some of the material contributed by contributor Smith. Contributor Brown added material that was based on material contributed by Smith and material contributed by Jones.

Web pages **142**, **144**, **146**, **148**, and **150** are preferably organized in the form of one or more passages **152**. For example, ibook Web page **142** contains passages **1**, **2**, and **3** and ibook Web page **150** contains passages **4***c* and **6***c*. The amount and type of material contained in a passage may depend on the type of media used. If an ibook contains only text, passages **152** may be paragraphs. Alternatively, passages **152** may be characters, words, sentences, paragraphs, sections, or chapters. If an ibook contains multimedia material, passages **152** can be graphic images, animation sequences, portions of a sound track, still video images, or video clips. If an ibook contains executable material, passages **152** can be modules of code.

When an ibook contributor adds material that is based on the material previously contributed by another contributor, attribution information is preferably automatically generated that keeps track of the identity of the source of the material. The attribution information may be provided, for example, in the form of attribution links **154**, **156**, **158**, and **160** between passages **152**.

Attribution link **154** indicates that passage **3**b, which was contributed by Jones, was based on passage **3**, contributed by Smith. Similarly, attribution link **160** indicates that passage **6***c*, which was contributed by Brown, was based on passage **6**, contributed by Smith. Attribution link **156** indicates that Jones contributed passage **4***b* based on passage **4** of Smith. Attribution link **158** indicates that Brown contributed passage **4***c* based on passage **4***b* of Jones.

Attribution information is preferably automatically generated when a contributor copies existing ibook material. For example, contributor Jones may have used a cut and paste feature in derivation tool **132** to cut and paste text or multimedia material from passage **3** when creating passage **3***b*. During the process of cutting and pasting from passage **3** to passage **3***b*, authoring tool **86** automatically generates attribution information including attribution link **154**.

Another way in which attribution information can be generated is when a contributor selects a certain derivation style template with derivation tool **132**, prior to contributing new material. After the style template is selected, derivation tool **132** prompts the contributor for attribution information, which is used to automatically create attribution links that relate the new material to the original material. For example, Jones may select the derivation type commentary, in order to create a commentary based on passages **3** and **4** of Smith's work. Derivation tool **132** queries Jones as to the authorship of the material on which the commentary is based. Jones must enter suitable information identifying the original contributor's material. Derivation tool **132** preferably will not let Jones proceed until valid attribution information has been provided. If desired, a system supervisor can monitor the creation and use of attribution information, such as the implementation of attribution links **154**, **156**, **158**, and **160**.

Sequence links **162**, **164**, and **166** are hypertext links that link welcome message page **140** and ibook pages **142**, **144**, and **146**. Sequence links **162**, **164** and **166** were created by authoring tool **86** when contributor Smith created ibook Web pages **142**, **144**, and **146**. Sequence link **168** was created by contributor Brown using linking tool **134** (FIG. **6**). The creation of sequence links such as sequence link **168** is at the discretion of the contributor.

Derivation links **170, 172, 174,** and **176** are another type of link that is formed in connection with ibook web pages **142, 144, 146, 148,** and **150**. Derivation links **170, 172, 174,** and **176** preferably point in the opposite direction of attribution links **154, 156, 158,** and **160**. Whenever a derivation is formed of an existing passage, a derivation link is formed that indicates that the derived passage has been formed.

Derivation links **170, 172, 174,** and **176** are preferably automatically generated when passages **3***b*, **4***b*, **4***c*, and **6***c* are created. For example, if a contributor uses a cut and paste feature in derivation tool **132** to cut and paste material from one passage to another, authoring tool **86** automatically generates derivation information including derivation links **170, 172, 174,** and **176**.

The derivation information for each passage **152** (e.g., the existence and identity of any associated derivation links for a given passage) and the attribution information (e.g. the existence and identity of any associated attribution links for a given passage) are used by navigation tool **84** when a user navigates through the material in an ibook. For example, when a user views a passage that has a corresponding derivation, the user can be alerted that the derivation exists and can be given an opportunity to view the derivation. Likewise, when a user views a passage that is a derivation, the user can be alerted that a corresponding original exists. Derivation information and attribution information may be stored in passage database **74** (FIG. **3**).

Multigenerational derivation and attribution relationships exist between passages **152** (e.g., between passages **4** and **4***c* in FIG. **7**). These relationships may either be represented by links between immediately adjoining passages (e.g. **4** and **4***b* or **4** and **4***c*) as shown in FIG. **7**, or may be represented by direct links between nonadjoining passages (e.g., between passages **4** and **4***c*).

In addition, during the creation of passages **152** authoring tool **86** and ibook server application **64** cause information to be stored in passage database **74** that identifies which Web page **138** contains each passage **152**. Information regarding the content of passages **152** ("passage characteristics") is preferably also stored during passage creation. Passage characteristics include the identity of the passage's contributor (which may be stored in contributor database **68**), the media (e.g., text, audio, video), the time and date of passage creation, the language of the passage, the interpreter for the passage if the passage is executable code, and the subject matter of the passage. Some of these passage characteristics can be determined automatically by ibook system **52**. For example, the identity of the contributor can be determined from the ID number of the contributor. Other passage characteristics might be more easily entered by the contributor, such as the language of the material in the passage. Regardless of how the passage characteristics are entered into system **52**, these characteristics are preferably stored in passage database **74** and are used during navigation through the ibook.

An illustrative ibook navigation tool **84** is shown in FIG. **8**. In FIG. **8**, passages **152** are illustrated as paragraphs of text **178**. In a multimedia environment, passages **152** would be multimedia segments presented on a computer monitor as video accompanied by sound. When passages **152** are executable modules, navigation tool **84** presents the passages by downloading and executing the passages. Style buttons **180** allow a user to select a desired format for the presentation of information on client **60**. Each style is controlled by an ibook passage (e.g., a Java program) which implements that style. Suitable styles include a Microsoft Windows 3.1 format with a title bar at the top of the screen or a photorealistic style, in which navigation controls are displayed in a realistic manner (e.g., as a desk containing a file drawer, etc.). Window size buttons **182** allow the user to adjust the size of the window containing ibook navigation tool **84** when Web browser **82** is operating in a windows-type environment. Magnification buttons **184** allow the user to adjust the magnification of the contents of the display window.

Cursor keys **186** move cursor **188** up, down, left, or right within a passage **152** on a given ibook Web page **138**. If desired, inner portion **190** of cursor keys **186** can be used to provide slow cursor movement. Whenever a user moves cursor **188** into a passage that has an associated derivation or original, the user may be alerted. For example, bar **191** may be provided in parallel with passage **178***b* to indicate that a derivation or original exists for that passage, which the user may wish to view. Navigation tool **84** determines when to display bars such as bar **191** based on the derivation information (i.e., derivation links **170, 172, 174, 176** and derivation type information) and attribution information stored in passage database **74**. Derivation traverse buttons **192** preferably light up when cursor **188** enters a passage (such as passage **178***b*) that has an associated derivation or original.

Clicking on the right derivation traverse button causes navigation tool to present, e.g., the next most recent derivation associated with that passage and clicking on the left derivation traverse button produces the opposite result. For example, if a user is viewing passage **4***b* (FIG. **7**) and the right derivation traverse button **192** is selected, navigation tool **84** displays the contents of passage **4***c*. If, however, a user is viewing passage **4***b* and the left derivation traverse button **192** is selected, navigation tool **84** displays the contents of passage **4**.

Back and forward buttons **194** allow a user to navigate along a browsing trail through Web pages **138** that has been defined by the user or a contributor who has previously navigated through the material using scroll buttons **186** and derivation traverse buttons **192**. Volume buttons **193** control the sound volume in multimedia material. Multiple volume control buttons are preferably provided to control the mix when playing audio tracks in parallel.

An additional navigation control feature provided by navigation tool **84** is drop-down menu **196**. The user can make selections with drop-down menu **196** that aid in navigating ibook passages **152**. For example, drop-down menu **196** may contain a list of all derivations and original material associated with the passage that the user is currently viewing. The user can navigate to one of these derivations or originals by selecting a desired entry or entries from the list. Drop-down menu **196** can also contain a list of common passage characteristics, such as media type, identity of contributor, date of creation, language, and subject matter (e.g., as predefined by keywords entered by the contributor or extracted from passages **152** automatically by the ibook system). If desired, a user can view only the works of Jones by selecting "Jones" from drop down menu **196**. Similarly, if the user were only interested in viewing material in English, the user could select English under the drop-down menu heading entitled "language."

If desired, the manner in which passages **152** are presented to a viewer by navigation tool **84** may be based in part on derivation type information associated with a passage. For example, if a passage is a revision of a previous passage, navigation tool **84** can, as a default, present only the most

recent version of the passage. If a passage is an alternate version of another passage, navigation tool **84** can, as a default, offer the user a choice of viewing either passage. If a passage is a transcription of another passage, then navigation tool **84** can present both the original passage and the transcribed passage on the screen of client **60** at the same time, in a split screen format. Navigation tool **84** could give priority to a particular media (such as video) when derivations of the same passage are present in more than one type of media. Viewer preferences that may be used to automatically chose between alternative passages are preferably stored in the viewer database **66**. If a passage is a combination, navigation tool **84** may enable a user to view the components of the combination sequentially (e.g., when the components are chapters in a book) or in parallel (e.g., when the components are audio tracks in a song).

As a user views passages **152**, ibook server application **64** preferably stores information concerning which passages have been accessed in access database **70**. Web browser **82** and ibook navigation tool **84** are also involved in keeping track of the length of time a user views each passage. This information is used to reward the contributors whose material is viewed. In addition, the contributors whose material was used to form the basis of the viewed work are rewarded. Contributors may therefore be compensated, even if their work is not accessed and viewed directly by the user. For example, if Smith contributes a book and Jones writes an alternate chapter, both Jones and Smith may be rewarded when the alternate chapter is viewed. The process of rewarding contributors may be substantially automatic and may be administered by ibook server **24** of the current ibook sponsor or may be administered by ibook server **22** at the ibook parent organization.

As the user navigates through an ibook using navigation tool **84**, navigation tool **84** transmits certain access information to server **56**, making requests to view material. The steps involved in processing and storing the access information are shown in FIG. **9**. At step **198**, the user at client **60** determines which passage is to be viewed, for example, by using the various buttons provided by navigation tool **84** (FIG. **8**). Navigation tool **84** preferably generates a request to view a desired passage and transmits this request to server **56** at step **200**. Server application **64** at server **56** receives the request and locates the requested passage in ibook Web pages database **76** at step **202**. At step **204**, server **56** records information about the access request, such as a time and date entry identifying when the requested access took place. Server **56** transmits the requested assage to client **60** at step **206**. Client **60** displays the passage and may make a time and date entry in local access database **92** at step **208**. If time and date entries are made in local access database **92**, this information is periodically made available to server **56** for storage in access database **70**. At step **210**, the user completes viewing of the passage and at step **212**, client **60** transmits information indicating that viewing is complete to server **56**. At step **214**, server **56** records access information in access database **70** that indicates when the viewing of the passage was completed, e.g., by making a time and date entry.

As defined herein, the term "access information" includes information such as a passage identifier, time and date entries, and information indicating the nature of the transmission from client **60** to server **56**. The passage identifier is preferably a universal resource locator (URL) for the passage requested from the ibook Web pages database **76**. The information indicating the nature of the transmission indicates whether the transmission from client **60** to server **56** is a request for the display of a passage (shown by arrow **216**) or is a transmission indicating that the user has completed viewing the passage (shown by arrow **218**).

Ibook functions related to revenue collection and distribution are preferably provided by ibook demons **78** (FIG. **3**). An illustrative revenue collection process that is implemented with an ibook demon **78** is shown in FIG. **10**. The revenue collection process shown in FIG. **10** may be run periodically (e.g., once per day). As shown in FIG. **10**, server **56** scans access database **70** to collect all access records for the user who has viewed material at step **220**. The access records contain information regarding the number of accesses of ibook material that were made and the start and stop times of each access. At step **222**, server **56** charges the user who has viewed material according to a predetermined rate schedule. For example, the user can be billed based on the on-line time spent by the user accessing ibook material or the user can be billed based on the number of accesses made. If desired, the user can be billed at a flat rate. At step **224**, the users's account balance is adjusted accordingly. The user is billed (e.g., by mail or automatic credit card debit) at step **226**.

Automatic revenue distribution may be performed by ibook demons **78** that implement the processes shown in FIGS. **11** and **12**. FIG. **11** shows a process for collating passage information from access database **70**. The steps shown in FIG. **11** are performed for each passage in ibook Web pages database **76**. At step **228**, access database **70** is scanned for records containing access information pertaining to the passage. At step **230**, server **56** uses these records to update passage database **74** to reflect the amount that the passage has been directly accessed by a viewer (e.g., using navigation tool **84**, as shown in FIG. **9**). The "amount" that the passage has been accessed can be determined based on the cumulative access time for that passage and/or the number of "hits" the passage has received (as determined from the access information in the access database). When a contributor's material is directly accessed by the user, the material is being directly used and the contributor is rewarded based on the amount of that access.

Preferably, a contributor is also rewarded when a derivation based on the contributor's material is accessed. When the derivation is accessed, the contributor's material is being indirectly used. At step **232**, server **56** uses attribution information associated with each passage that has been accessed to determine whether the passage was based on the work of another contributor. If the passage was based on the passage of another contributor, the passage database **74** is updated based on the attribution information. There are preferably separate data fields associated with each passage in passage database **74** that allow passage database **74** to maintain a record of the amount of direct and indirect usage for each passage. For example, each passage can have associated data fields in which the number of direct hits and the number of indirect hits (i.e., hits on a derivation based on the passage) are stored.

After the process of FIG. **11** is used to update the passages in passage database **74** to reflect the amount of direct and indirect usage of these passages by users, the process of FIG. **12** is used to collate this information for each of the contributors and to reward the contributors accordingly. The process steps of FIG. **12** are performed for each contributor. At step **234**, server **56** scans passage database **74** for the passages contributed by the contributor. The total amount that these passages have been directly used (e.g., when a viewer directly accesses a passage) is determined at step **236**. For example, if each of the contributor's passages in the

passage database **74** has an associated data field that indicates the amount of direct use for that passage, step **236** involves totaling the amount of such direct use for all of the passages. The total amount that the contributor's passages have been indirectly used (e.g., when a viewer accesses a derivation based on the contributor's passage) is determined at step **238**. For example, if each of the contributor's passages in the passage database **74** has an associated data field that indicates the amount of indirect use of those passages, step **238** involves totaling the amount of such indirect use for all of the passages.

The contributor is rewarded at step **240**. If desired, the contributor may receive a non-monetary reward. For example, ibook server **56** may publicly post the amount that the contributor's material receives hits, which serves to reward contributors with publicity regarding the popularity of the material they contribute. Contributors may also be rewarded by distributing revenue that has been collected from the users with the process of FIG. **10** or that has been generated by licensing intellectual property developed by the community of contributors associated with an ibook. Preferably, the contributor is rewarded based on both the direct use of the contributor's material (e.g., by direct viewer access) and on the indirect use of the material (e.g., access of a derivation based on the contributor's material).

Monetary rewards may be distributed automatically, e.g., by crediting the bank accounts of the relevant contributors. Preferably, the sponsor of the ibook that is viewed is also rewarded. If desired, the ibook parent organization may be compensated. If the structure or content of an ibook (e.g., ibook A in FIG. **1**) is replicated to form a second ibook (e.g., ibook A' in FIG. **1**), this information (or references to this information) is stored in ibook offspring database **72** and may be used to compensate the sponsor and contributors of the parenting ibook (ibook A) for revenue derived from the offspring ibook (ibook A').

The replication function used to replicate ibook A' from ibook A in FIG. **1** may be provided by a program that prompts an enrolled sponsor for information concerning the replication process (i.e., by a wizard program). The program used for replication is preferably a downloadable plug-in, such as ibook replication tool **90** (FIG. **3**). Steps involved in replication of an ibook are shown in FIG. **13**. At step **242**, a potential sponsor completes an enrollment process similar to the viewer and contributor enrollment processes shown in FIGS. **4** and **5**. During the enrollment process, the nature, obligations, and benefits of becoming a sponsor of an ibook are explained. A sponsor who has already created a new ibook may enroll with additional ibooks so that the sponsor will be permitted to replicate material from any such additional ibooks into the new ibook. If the sponsor agrees to the rules governing ibook sponsorship and the replication of material from an existing ibook, the sponsor is enrolled.

At step **244**, the sponsor specifies the identity of the child ibook server onto which a new ibook is to be placed or onto which additional material is to be replicated. At step **246**, the sponsor specifies the identity of the new ibook. At step **248**, it is determined whether the child server identified at step **244** has a server application installed. If the server application is not installed, server application **64** from the parent ibook with which the sponsor has enrolled is replicated (e.g. by downloading or referencing) at step **250**. If server application **64** is already installed, step **250** is bypassed. At step **252**, the sponsor selects which ibook demons **78** it is desired to replicate from the parent server to the child server. The selected demons **78** are replicated at step **254**. At step **256**, the sponsor selects which ibook parent plug-ins **80** are to be replicated onto the child server. The selected plug-ins are replicated at step **258**. At step **260**, it is determined whether ibook databases have been initialized on the child server. If not, the child ibook server databases are initialized at step **262**. If the child ibook server databases have already been initialized, step **262** is bypassed.

At step **264**, the sponsor decides whether content of the parent ibook (e.g., in the form of text or multimedia information stored in ibook Web pages database **76** and linking information stored in passage database **74**) should be replicated from the parent server onto the child server. The selected ibook Web pages and associated linking information are replicated from the parent server to the child server at step **266**. The child ibook databases are updated at step **268**. Information concerning the replication process is stored in offspring database **72**. Replication terminates at step **270**. The content of multiple ibook parents can be merged into a single child ibook by repeating the process of FIG. **13**.

Because the ibook can be replicated, successful ibooks can spawn additional ibooks. Further, since ibooks may be created to specifically support certain media or themes, different ibooks may spawn different families of offspring ibooks each of which has an associated community of interested users.

In order to ensure that the presence of an ibook is known to those who would be interested in contributing to or viewing the content of the ibook, ibooks preferably support various functions for advertising their presence to popular search engine databases. Suitable search engines to which the ibook can advertise its presence include Yahoo, Alta Vista, and Lycos. One suitable way in which to advertise the presence of an ibook is for ibook server application **56** (FIG. **3**) to send suitably formatted e-mail messages to the Web site manager at the Web site address associated with the various search engines. As shown in FIG. **1**, search engine server **36** contains Web index **40**. Ibook server application **64** or an ibook demon **78** may automatically extract hypertext markup language (HTML) keyword information from the ibook Web pages stored in ibook Web pages database **76** and/or the passage characteristics for these Web pages stored in ibook passage database **74** and submit this information for inclusion in Web index **40**. Ibook authoring tool **84** preferably also presents the contributor with queries for keywords during the authoring process. This keyword information can also be submitted for inclusion in Web index **40**.

If desired, the ibook server associated with the ibook parent organization can be used to support a comprehensive database. The ibook server application **64** of each existing ibook can provide keyword and other ibook indexing information to this database.

Certain aspects involved in using an ibook system to facilitate the creation of musical works are shown in FIG. **14**. In ibook system **272**, a first composer at client **274** records a high-fidelity track (track A) in the form of ibook passage **276** using ibook authoring tool **86**. For example, the first composer may create a rhythm guitar track to form the basis of a new song. Because high-fidelity audio requires a substantial amount of memory to store, the first composer can create a low-fidelity derivation of track A on server **278** as passage **280** and make this version available to other ibook contributors. Passage **280** is an alternate resolution derivation of passage **276** and has an associated derivation link **282**. Attribution link **284** shows that passage **280** was derived from passage **276**.

The low-fidelity version of track A in passage **280** can be viewed (listened to) by a second composer at client **286**, who

can then add material, such as a vocal track. Low-fidelity passage **280** contains less information than the corresponding high-fidelity passage **278**, so it is easier to provide passage **280** to client **286**. The second composer may listen to the contents of passage **280** in realtime over data network **288**, or a local copy of passage **280** can be downloaded onto client **286**. Playback of low-fidelity track A may be accomplished using navigation tool **84**. If desired, the second composer can use authoring tool **86** to add a vocal track, while listening to the rhythm guitar track of the first composer. A high-fidelity version of the vocal track (track B) can be stored on client **286** in passage **290**. Passage **290** is a collaboration derivation of passage **280** and has an associated derivation link **294** and attribution link **295**. The second composer can create a low-fidelity version of track B on server **278** in passage **292**. Passage **292** is an alternate resolution derivation of passage **290** and has an associated derivation link **297**. Attribution link **296** shows that page **292** was derived from page **290**.

Authoring tool **86** preferably supports the automatic generation of derivation and attribution information during the process of recording new tracks based on previously contributed tracks. Ibook navigation tool **84** allows users to listen to multiple tracks in parallel, in the form of a song. Users can select which tracks are played back and the mix of the track using tools such as drop down menu **196** and volume buttons for each track. For example, the user can elect to hear only those tracks contributed by a certain composer. In addition, contributors can create songs by copying selected tracks and editing them using authoring tool **86**.

Server **278** maintains sufficient information concerning original passages **276** and **290** to allow passages **276** and **290** to be copied to server **278** or any suitable location upon request. For example, server **278** may contain the URLs of passages **276** and **290** in ibook databases such as passage database **74** and ibook Web pages database **76**. If desired, the URLs of passages **276** and **290** can be used by navigation tool **84** and authoring tool **86** to play back the high-fidelity versions of tracks A and B.

Although various information concerning the ibook passages, such as derivation linking information, derivation type information, passage characteristics, and attribution information have been described as being stored in passage databases, a suitable alternative is to store this information in the Web pages that contain the passages or as a set of relations and tables in a suitable relational database, or as a set of objects in an object database. Another suitable alternative is to use linking technology, such as Object Linking and Embedding (OLE) or Component Object Model (COM) technology to represent the passages and their attribution and derivation relationships.

Various techniques may be used to represent the contents of ibook Web pages (e.g., the ibook Web pages in ibook Web pages database **76**). For example, ibook Web pages may be represented by static data. Alternatively, ibook Web pages may be represented by code that is capable of generating the Web page contents, e.g., code that generates the entries of a table or list. If desired, ibook Web pages on a given server or client may be represented by a reference (e.g., a URL) to material that is actually stored elsewhere in the data network.

In addition, although the data network preferably supports the HTML protocol that is commonly used to implement World Wide Web communications (because the HTML format has the advantages of standardization, wide-use, and sufficient capacity to implement the features of the ibook system), other protocols may be used, such as one based on Virtual Reality Modeling Language (VRML) or Structured Generalized Markup Language (SGML) or any client-server transaction-based packet-switched protocol.

The foregoing is merely illustrative of the principles of this invention and various modifications can be made by those skilled in the art without departing from the scope and spirit of the invention.

What is claimed is:

1. A system for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the system comprising:

means for allowing contributors to contribute material in different languages wherein at least some of the contributed material is based on the contributed material of other contributors;

means for generating attribution information identifying contributors whose contributed material is used by other contributors;

means for generating derivation information associating the contributed material in one language with the contributed material in another language;

a navigation tool comprising:

means for allowing the users to view at least some of the contributed material;

means for alerting the users when contributed material is available in a language other than the language of the contributed material being viewed;

means for allowing the users to select one of the languages; and

means for allowing the users to view only the contributed material that is in the selected language; and

means for providing access information concerning the amount that the contributed material is viewed.

2. The system of claim **1** further comprising means for automatically rewarding the contributors based on the access information and the attribution information.

3. The system of claim **2** wherein the means for automatically rewarding the contributors further comprises means for automatically making monetary distributions to the contributors.

4. The system of claim **1** further comprising means for determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

5. The system of claim **1** further comprising means for providing the contributed material in the form of a plurality of passages on the Web pages.

6. The system of claim **5** further comprising:

means for viewing the passages; and

means for alerting users who view the passages when a passage is a derivation of another passage.

7. The system of claim **5** further comprising means for allowing the contributors to specify passage characteristics for each passage.

8. The system of claim **7** wherein the passage characteristics include subject matter information.

9. The system of claim **1** wherein the means for generating attribution information further comprises means for automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

10. A system for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the system comprising:

means for allowing contributors to contribute material in different media types wherein at least some of the contributed material is based on the contributed material of other contributors;

means for generating attribution information identifying contributors whose contributed material is used by other contributors;

means for generating derivation information associating the contributed material in one media type with the contributed material in another media type;

a navigation tool comprising:

means for allowing the users to view at least some of the contributed material in a media type;

means for alerting the users when contributed material is available in a media type other than the media type of the contributed material being viewed;

means for allowing the users to select one of the media types; and

means for allowing the users to view only the contributed material that is in the selected media type; and

means for providing access information concerning the amount that the contributed material is viewed.

11. The system of claim 10 further comprising means for automatically rewarding the contributors based on the access information and the attribution information.

12. The system of claim 11 wherein the means for automatically rewarding the contributors further comprises means for automatically making monetary distributions to the contributors.

13. The system of claim 10 further comprising means for determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

14. The system of claim 10 further comprising means for providing the contributed material in the form of a plurality of passages on the Web pages.

15. The system of claim 14 further comprising:

means for viewing the passages; and

means for alerting users who view the passages when a passage is a derivation of another passage.

16. The system of claim 14 further comprising means for allowing the contributors to specify passage characteristics for each passage.

17. The system of claim 16 wherein the passage characteristics include subject matter information.

18. The system of claim 10 wherein the means for generating attribution information further comprises means for automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

19. A system for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material on various subjects that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the system comprising:

means for allowing contributors to contribute material on different subjects wherein at least some of the contributed material is based on the contributed material of other contributors;

means for generating attribution information identifying contributors whose contributed material is used by other contributors;

means for generating derivation information associating the contributed material on one subject with the contributed material on another subject;

a navigation tool comprising:

means for allowing the users to view at least some of the contributed material;

means for alerting the users when contributed material is available on a subject other than the subject of the contributed material being viewed;

means for allowing the users to select one of the subjects; and

means for allowing the users to view only the contributed material that is on the selected subject; and

means for providing access information concerning the amount that the contributed material is viewed.

20. The system of claim 19 further comprising means for automatically rewarding the contributors based on the access information and the attribution information.

21. The system of claim 20 wherein the means for automatically rewarding the contributors further comprises means for automatically making monetary distributions to the contributors.

22. The system of claim 19 further comprising means for determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

23. The system of claim 19 further comprising means for providing the contributed material in the form of a plurality of passages on the Web pages.

24. The system of claim 23 further comprising:

means for viewing the passages; and

means for alerting users who view the passages when a passage is a derivation of another passage.

25. The system of claim 23 further comprising means for allowing the contributors to specify passage characteristics for each passage.

26. The system of claim 25 wherein the passage characteristics include subject matter information.

27. The system of claim 19 wherein the means for generating attribution information further comprises means for automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

28. A system for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the system comprising:

means for allowing contributors to contribute material that is stored by the server, wherein at least some portions of the contributed material are alternate versions of other portions of the contributed material;

means for generating attribution information identifying the contributors whose contributed material is stored;

means for generating derivation information associating the contributed material of some of the contributors with the contributed material of other contributors;

means for allowing the users to view the contributed material of various contributors at one of the clients;

means for alerting users when an alternate version of the displayed contributed material exists; and

means for providing access information concerning the amount that the contributed material is viewed.

29. The system defined in claim **28** further comprising navigation tool means for allowing the users to select between displaying contributed material and an associated alternate version.

30. The system of claim **28** further comprising means for automatically rewarding the contributors based on the access information and the attribution information.

31. The system of claim **30** wherein the means for automatically rewarding the contributors further comprises means for automatically making monetary distributions to the contributors.

32. The system of claim **28** further comprising means for determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

33. The system of claim **28** further comprising means for providing the contributed material in the form of a plurality of passages on the Web pages.

34. The system of claim **33** further comprising means for allowing the contributors to specify passage characteristics for each passage.

35. The system of claim **34** wherein the passage characteristics include subject matter information.

36. The system of claim **28** wherein the means for generating attribution information further comprises means for automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

37. A method for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the method comprising the steps of:

allowing contributors to contribute material in different languages wherein at least some of the contributed material is based on the contributed material of other contributors;

generating attribution information identifying contributors whose contributed material is used by other contributors;

generating derivation information associating the contributed material in one language with the contributed material in another language;

providing a navigation tool comprising the steps of:

allowing the users to view at least some of the contributed material;

alerting the users when contributed material is available in a language other than the language of the contributed material being viewed;

allowing the users to select one of the languages; and

allowing the users to view only the contributed material that is in the selected language; and

providing access information concerning the amount that the contributed material is viewed.

38. The method of claim **37** further comprising the step of automatically rewarding the contributors based on the access information and the attribution information.

39. The method of claim **38** wherein the step of automatically rewarding the contributors further comprises the step of automatically making monetary distributions to the contributors.

40. The method of claim **37** further comprising the step of determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

41. The method of claim **37** further comprising the step of providing the contributed material in the form of a plurality of passages on the Web pages.

42. The method of claim **41** further comprising the steps of:

displaying the passages for viewing; and

alerting users who view the passages when a passage is a derivation of another passage.

43. The method of claim **41** further comprising the step of allowing the contributors to specify passage characteristics for each passage.

44. The method of claim **43** wherein the passage characteristics include subject matter information.

45. The method of claim **37** wherein the step of generating attribution information further comprises the step of automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

46. A method for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the method comprising the steps of:

allowing contributors to contribute material in different media type wherein at least some of the contributed material is based on the contributed material of other contributors;

generating attribution information identifying contributors whose contributed material is used by other contributors;

generating derivation information associating the contributed material in one media type with the contributed material in another media type;

providing a navigation tool comprising the steps of:

allowing the users to view at least some of the contributed material;

alerting the users when contributed material is available in a media type other than the media type of the contributed material being viewed;

allowing the users to select one of the media types; and

allowing the users to view only the contributed material that is in the selected media type; and

providing access information concerning the amount that the contributed material is viewed.

47. The method of claim **46** further comprising the step of automatically rewarding the contributors based on the access information and the attribution information.

48. The method of claim **47** wherein the step of automatically rewarding the contributors further comprises the step of automatically making monetary distributions to the contributors.

49. The method of claim **46** further comprising the step of determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

50. The method of claim **46** further comprising the step of providing the contributed material in the form of a plurality of passages on the Web pages.

51. The method of claim **50** further comprising the steps of:

displaying the passages for viewing; and

alerting users who view the passages when a passage is a derivation of another passage.

52. The method of claim 50 further comprising the step of allowing the contributors to specify passage characteristics for each passage.

53. The method of claim 52 wherein the passage characteristics include subject matter information.

54. The method of claim 46 wherein the step of generating attribution information further comprises the step of automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

55. A method for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material on various subjects that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the method comprising the steps of:

allowing contributors to contribute material on different subjects wherein at least some of the contributed material is based on the contributed material of other contributors;

generating attribution information identifying contributors whose contributed material is used by other contributors;

generating derivation information associating the contributed material on one subject with the contributed material on another subject;

providing a navigation tool comprising the steps of:

allowing the users to view at least some of the contributed material;

alerting the users when contributed material is available on a subject other than the subject of the contributed material being viewed;

allowing the users to select one of the subjects; and

allowing the users to view only the contributed material that is on the selected subject; and

providing access information concerning the amount that the contributed material is viewed.

56. The method of claim 55 further comprising the step of automatically rewarding the contributors based on the access information and the attribution information.

57. The method of claim 56 wherein the step of automatically rewarding the contributors further comprises the step of automatically making monetary distributions to the contributors.

58. The method of claim 55 further comprising the step of determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

59. The method of claim 55 further comprising the step of providing the contributed material in the form of a plurality of passages on the Web pages.

60. The method of claim 59 further comprising the steps of:

displaying the passages for viewing; and

alerting users who view the passages when a passage is a derivation of another passage.

61. The method of claim 59 further comprising the step of allowing the contributors to specify passage characteristics for each passage.

62. The method of claim 61 wherein the passage characteristics include subject matter information.

63. The method of claim 55 wherein the step of generating attribution information further comprises the step of automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

64. A method for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the method comprising the steps of:

allowing contributors to contribute material that is stored by the server, wherein at least some portions of the contributed material are alternate versions of other portions of the contributed material;

generating attribution information identifying the contributors whose contributed material is stored;

generating derivation information associating the contributed material of some of the contributors with the contributed material of other contributors;

allowing the users to view the contributed material of various contributors at one of the clients;

alerting the users when an alternate version of the displayed contributed material exists; and

providing access information concerning the amount that the contributed material is viewed.

65. The method of claim 64 further comprising the step of allowing the users to select between displaying contributed material and an associated alternate version with a navigation tool.

66. The method of claim 64 further comprising the step of automatically rewarding the contributors based on the access information and the attribution information.

67. The method of claim 66 wherein the step of automatically rewarding the contributors further comprises the step of automatically making monetary distributions to the contributors.

68. The method of claim 64 further comprising the step of determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

69. The method of claim 64 further comprising the step of providing the contributed material in the form of a plurality of passages on the Web pages.

70. The method of claim 69 further comprising the step of allowing the contributors to specify passage characteristics for each passage.

71. The method of claim 70 wherein the passage characteristics include subject matter information.

72. The method of claim 64 wherein the step of generating attribution information further comprises the step of automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

73. A system for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the system comprising:

means for allowing contributors to contribute material that is stored by the server, wherein the material is in a certain media type, in a certain language, and on a certain subject and at least some portions of the contributed material are alternate versions of other portions of the contributed material;

means for generating attribution information identifying the contributors whose contributed material is stored;

means for generating derivation information associating the contributed material of some of the contributors with the contributed material of other contributors;

a navigation tool comprising:

means for allowing the users to view at least some of the contributed material at one of the clients;

means for alerting the users when contributed material is available in an alternate version of the contributed material being viewed;

means for allowing the users to select an alternate version;

means for allowing the users to view the selected alternate version;

means for alerting the users when contributed material is available in a language other than the language of the contributed material being viewed;

means for allowing the users to select one of the languages;

means for allowing the users to view only the contributed material that is in the selected language;

means for alerting the users when contributed material is available in a media type other than the media type of the contributed material being viewed;

means for allowing the users to select one of the media types;

means for allowing the users to view only the contributed material that is in the selected media type;

means for alerting the users when contributed material is available on a subject other than the subject of the contributed material being viewed;

means for allowing the users to select one of the subjects; and

means for allowing the users to view only the contributed material that is on the selected subject; and

means for providing access information concerning the amount that the contributed material is viewed.

74. The system of claim **73** further comprising means for automatically rewarding the contributors based on the access information and the attribution information.

75. The system of claim **74** wherein the means for automatically rewarding the contributors further comprises means for automatically making monetary distributions to the contributors.

76. The system of claim **73** further comprising means for determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

77. The system of claim **73** further comprising means for providing the contributed material in the form of a plurality of passages on the Web pages.

78. The system of claim **77** further comprising means for alerting users who view the passages when a passage is a derivation of another passage.

79. The system of claim **77** further comprising means for allowing the contributors to specify passage characteristics for each passage.

80. The system of claim **79** wherein the passage characteristics include subject matter information.

81. The system of claim **73** wherein the means for generating attribution information further comprises means for automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

82. A method for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the method comprising the steps of:

allowing contributors to contribute material that is stored by the server, wherein the material is in a certain media type, in a certain language, and on a certain subject and at least some portions of the contributed material are alternate versions of other portions of the contributed material;

generating attribution information identifying the contributors whose contributed material is stored;

generating derivation information associating the contributed material of some of the contributors with the contributed material of other contributors;

providing a navigation tool comprising the steps of:

allowing the users to view at least some of the contributed material at one of the clients;

alerting the users when contributed material is available in an alternate version of the contributed material being viewed;

allowing the users to select an alternate version;

allowing the users to view the selected alternate version;

alerting the users when contributed material is available in a language other than the language of the contributed material being viewed;

allowing the users to select one of the languages;

allowing the users to view only the contributed material that is in the selected language;

alerting the users when contributed material is available in a media type other than the media type of the contributed material being viewed;

allowing the users to select one of the media types;

allowing the users to view only the contributed material that is in the selected media type;

alerting the users when contributed material is available on a subject other than the subject of the contributed material being viewed;

allowing the users to select one of the subjects; and

allowing the users to view only the contributed material that is on the selected subject; and

providing access information concerning the amount that the contributed material is viewed.

83. The method of claim **82** further comprising the step of automatically rewarding the contributors based on the access information and the attribution information.

84. The method of claim **83** wherein the step of automatically rewarding the contributors further comprises the step of automatically making monetary distributions to the contributors.

85. The method of claim **82** further comprising the step of determining the amount that the users directly and indirectly use the contributed material based on the access information and the attribution information.

86. The method of claim **82** further comprising the step of providing the contributed material in the form of a plurality of passages on the Web pages.

87. The method of claim **86** further comprising the step of alerting users who view the passages when a passage is a derivation of another passage.

88. The method of claim **86** further comprising the step of allowing the contributors to specify passage characteristics for each passage.

89. The method of claim **88** wherein the passage characteristics include subject matter information.

90. The method of claim **82** wherein the step of generating attribution information further comprises the step of automatically generating the attribution information when one contributor contributes material by cutting and pasting from the contributed material of another contributor.

91. A system for use in a communications network having a server and clients linked by a data network wherein contributors use the clients to contribute material that is stored by the server and users at the clients access the material for viewing, the system comprising:

authoring means used by the contributors for creating derivations based on previously contributed material;

means for ensuring that each derivation is saved as an individual copy so that multiple derivations may be created at the same time;

means for generating attribution information identifying the contributors whose material is used to create the derivations, wherein the attribution information comprises an attribution link from each derivation to the previously contributed material on which that derivation is based;

means for generating a derivation link from the previously contributed material to each derivation based on that previously contributed material, wherein at least a given one of the derivations has an associated derivation that is based on the given derivation, wherein the given derivation and its associated derivation are linked by one of the attribution links and one of the derivation links, and wherein the given derivation and the previous contributed material on which the given derivation is based are linked by another one of the attribution links and another one of the derivation links;

means for viewing the material by navigating along the derivation and attribution links, wherein the users navigate from the given derivation to the previously contributed material on which the given derivation is based using the attribution link between the given derivation and that previously contributed material, wherein the users navigate from that previously contributed material to the given derivation using the derivation link between that previously contributed material and the given derivation, wherein the users navigate from the given derivation to its associated derivation using the derivation link between the given derivation and its associated derivation, and wherein the users navigate from the associated derivation to the given derivation using the attribution link between the associated derivation and the given derivation; and

means for providing access information concerning the amount that the previously contributed material and derivations are viewed.

92. The system of claim 91 further comprising means for automatically rewarding the contributors based on the access information and the attribution information.

93. The system of claim 92 wherein the means for automatically rewarding the contributors further comprises means for automatically making monetary distributions to the contributors.

94. The system of claim 91 further comprising means for determining the amount that the users directly and indirectly use the previously contributed material and the derivations based on the access information and the attribution information.

95. The system of claim 91 wherein the authoring means further comprises means for allowing a contributor of a derivation to enter a derivation type for the derivation.

96. The system of claim 95 wherein the derivation type is alternate version.

97. The system of claim 95 wherein the derivation type is commentary.

98. The system of claim 95 wherein the means for viewing further comprises means for navigating based on the derivation type.

99. The system of claim 91 further comprising means for providing the Web pages in the form of a plurality of passages.

100. The system of claim 99 wherein the authoring means further comprises means for allowing a contributor to enter passage characteristics for each passage.

101. The system of claim 100 wherein the passage characteristics include subject matter information.

102. The system of claim 100 wherein the passage characteristics include media type.

103. The system of claim 100 wherein the means for viewing further comprises means for navigating based on the passage characteristics.

104. The system of claim 91 wherein the means for generating attribution information further comprises means for automatically generating the attribution information when the contributor creates one of the derivations by cutting and pasting material to the derivation from the previously contributed material.

105. The system of claim 91 further comprising means for automatically advertising the contents of the material on the server to a search engine database.

106. The system of claim 91 further comprising means for automatically replicating the contents and structure of said Web pages.

107. A method for use in a communications network having a server and clients linked by a data network wherein contributors use the clients to contribute material that is stored by the server and users at the clients access the material for viewing, the method comprising the steps of:

creating derivations with an authoring tool used by the contributors based on previously contributed material;

ensuring that each derivation is saved as an individual copy so that multiple derivations may be created at the same time;

generating attribution information identifying the contributors whose material is used to create the derivations, wherein the attribution information comprises an attribution link from each derivation to the previously contributed material on which that derivation is based;

generating a derivation link from the previously contributed material to each derivation based on that previously contributed material, wherein at least a given one of the derivations has an associated derivation that is based on the given derivation, wherein the given derivation and its associated derivation are linked by one of the attribution links and one of the derivation links, and wherein the given derivation and the previous contributed material on which the given derivation is based are linked by another one of the attribution links and another one of the derivation links;

viewing material by navigating along the derivation and attribution links, wherein the users navigate from the given derivation to the previously contributed material on which the given derivation is based using the attribution link between the given derivation and that previously contributed material, wherein the users navigate from that previously contributed material to the given derivation using the derivation link between that previously contributed material and the given derivation, wherein the users navigate from the given derivation to its associated derivation using the derivation link between the given derivation and its associated derivation, and wherein the users navigate from the associated derivation to the given derivation using

the attribution link between the associated derivation and the given derivation; and

providing access information concerning the amount that the previously contributed material and derivations are viewed.

108. The method of claim **107** further comprising the step of automatically rewarding the contributors based on the amount that their material is accessed by the users and the attribution information.

109. The method of claim **108** wherein the step of automatically rewarding the contributors further comprises the step of automatically making monetary distributions to the contributors.

110. The method of claim **107** further comprising the step of determining the amount that the users directly and indirectly use the previously contributed material and the derivations based on the access information and the attribution information.

111. The method of claim **107** wherein the step of creating derivations further comprises the step of allowing a contributor of derivative material based on previously contributed material to enter a derivation type to be associated with the derivative material.

112. The method of claim **111** wherein the derivation type is alternate version.

113. The method of claim **111** wherein the derivation type is commentary.

114. The method of claim **111** wherein the step of viewing further comprises the step of navigating based on the derivation type.

115. The method of claim **107** further comprising the step of providing the Web pages in the form of a plurality of passages.

116. The method of claim **115** wherein the step of creating derivations further comprises the step of allowing a contributor to enter passage characteristics associated with each passage.

117. The method of claim **116** wherein the passage characteristics include subject matter information.

118. The method of claim **116** wherein the passage characteristics include media type.

119. The method of claim **116** wherein the step of viewing further comprises the step of navigating based on the passage characteristics.

120. The method of claim **107** wherein the step of generating attribution information further comprises the step of automatically generating the attribution information when the contributor creates one of the derivations by cutting and pasting material to the derivation from the previously contributed material.

121. The method of claim **107** further comprising the step of automatically advertising the contents of the material on the server to a search engine database.

122. The method of claim **107** further comprising the step of automatically replicating the contents and structure of said Web pages.

123. A server for use in a data network supporting World Wide Web (Web) communications wherein contributors through the use of clients contribute material that is stored by the server in the form of Web pages for access by users at the clients for viewing, the server comprising:

means for storing derivations created by a client-based authoring tool used by the contributors based on previously contributed material;

means for ensuring that each derivation is saved as an individual copy so that multiple derivations may be created at the same time;

means for storing attribution information identifying the contributors whose material is used to create the derivations, wherein the attribution information comprises an attribution link from each derivation to the previously contributed material on which that derivation is based;

means for storing a derivation link from the previously contributed material to each derivation based on that previously contributed material, wherein at least a given one of the derivations has an associated derivation that is based on the given derivation, wherein the given derivation and its associated derivation are linked by one of the attribution links and one of the derivation links, and wherein the given derivation and the previous contributed material on which the given derivation is based are linked by another one of the attribution links and another one of the derivation links;

means for providing a navigation tool to at least one of the clients for allowing the users to view the material by navigating along the derivation and attribution links, wherein the users navigate from the given derivation to the previously contributed material on which the given derivation is based using the attribution link between the given derivation and that previously contributed material, wherein the users navigate from that previously contributed material to the given derivation using the derivation link between that previously contributed material and the given derivation, wherein the users navigate from the given derivation to its associated derivation using the derivation link between the given derivation and its associated derivation, and wherein the users navigate from the associated derivation to the given derivation using the attribution link between the associated derivation and the given derivation; and

means for receiving access information from the client concerning the amount that the previously contributed material and derivations are viewed.

124. A method for use in a data network supporting World Wide Web (Web) communications wherein contributors through the use of clients contribute material that is stored by a server in the form of Web pages and users at the clients access the stored material for viewing, the method comprising the steps of:

storing derivations created by a client-based authoring tool used by the contributors based on previously contributed material;

ensuring that each derivation is saved as an individual copy so that multiple derivations may be created at the same time;

storing attribution information identifying the contributors whose material is used to create the derivations, wherein the attribution information comprises an attribution link from each derivation to the previously contributed material on which that derivation is based;

storing a derivation link from the previously contributed material to each derivation based on that previously contributed material, wherein at least a given one of the derivations has an associated derivation that is based on the given derivation, wherein the given derivation and its associated derivation are linked by one of the attribution links and one of the derivation links, and wherein the given derivation and the previous contributed material on which the given derivation is based are linked by another one of the attribution links and another one of the derivation links;

providing a navigation tool to at least one of the clients for allowing the users to view the material by navigating

along the derivation and attribution links, wherein the users navigate from the given derivation to the previously contributed material on which the given derivation is based using the attribution link between the given derivation and that previously contributed material, wherein the users navigate from that previously contributed material to the given derivation using the derivation link between that previously contributed material and the given derivation, wherein the users navigate from the given derivation to its associated derivation using the derivation link between the given derivation and its associated derivation, and wherein the users navigate from the associated derivation to the given derivation using the attribution link between the associated derivation and the given derivation; and

receiving access information from the client concerning the amount that the previously contributed material and derivations are viewed.

125. A client for use in a communications network having a server and clients linked by a data network supporting World Wide Web (Web) communications, wherein contributors use the clients to contribute material that is stored by the server in the form of Web pages and users at the clients access the material for viewing, the client comprising:

authoring means used by the contributors for creating derivations based on previously contributed material;

means for ensuring that each derivation is saved as an individual copy so that multiple derivations may be created at the same time;

means for generating attribution information identifying the contributors whose material is used to create the derivations, wherein the attribution information comprises an attribution link from each derivation to the previously contributed material on which that derivation is based;

means for generating a derivation link from the previously contributed material to each derivation based on that previously contributed material, wherein at least a given one of the derivations has an associated derivation that is based on the given derivation, wherein the given derivation and its associated derivation are linked by one of the attribution links and one of the derivation links, and wherein the given derivation and the previous contributed material on which the given derivation is based are linked by another one of the attribution links and another one of the derivation links;

means for viewing the material by navigating along the derivation and attribution links, wherein the users navigate from the given derivation to the previously contributed material on which the given derivation is based using the attribution link between the given derivation and that previously contributed material, wherein the users navigate from that previously contributed material to the given derivation using the derivation link between that previously contributed material and the given derivation, wherein the users navigate from the given derivation to its associated derivation using the derivation link between the given derivation and its associated derivation, and wherein the users navigate from the associated derivation to the given derivation using the attribution link between the associated derivation and the given derivation; and

means for providing access information to the server concerning the amount that the previously contributed material and derivations are viewed.

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